



# **Fire Commissioner's Statistical Report**

**Alberta**

MUNICIPAL AFFAIRS  
Fire Commissioner's Office  
601 10808 99 Street  
Edmonton AB T5K 0G5

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# **1997**

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## **CONTENTS**

### **INTRODUCTION**

78 <sup>th</sup> Statistical Report of the Fire Commissioner .....	1
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### **SECTION 1 – ALBERTA FIRE CASUALTIES**

Fire Deaths 1988 – 1997 .....	7
Deaths Involving Fire 1988 – 1997 .....	7
Fire Deaths by Geographic Location – 1997 .....	8
Fatal Casualties by Status, Sex and Age – 1997 .....	9
Injured Casualties by Status, Sex and Age – 1997 .....	9
Condition of Fatal Casualties – 1997 .....	10
Action of Fatal Casualties – 1997 .....	10
Condition of Injured Casualties – 1997 .....	11
Action of Injured Casualties – 1997 .....	11
Fire Casualties by Month – 1997 .....	12
Fire Casualties by Time Period – 1997 .....	12
Fire Deaths by Major Property Classification – 1997 .....	13
Fire Deaths by Act or Omission – 1997 .....	14
Fire Deaths by Ignition Scenarios – 1997 .....	15
Deaths Involving Fire by Ignition Scenarios – 1997 .....	17
Trends in Alberta Fire Deaths 1988 – 1997 .....	19
Fire Injuries by Major Property Classification – 1997 .....	20
Fire Injuries by Act or Omission – 1997 .....	23
Trends in Alberta Fire Injuries 1988 – 1997 .....	26

### **SECTION 2 – ALBERTA FIRE LOSS INFORMATION**

Fire Losses in Alberta 1988 – 1997 .....	29
Fire Losses in Canada 1988 – 1997 .....	29
Trends in Alberta Fires 1988 – 1997 .....	30
Fires and Losses 1988 – 1997 .....	31
Fire Rates and Per Capita Losses 1988 – 1997 .....	32
Average Loss Per Fire 1988 – 1997 .....	32
Fire Losses Related to Economic Indices 1988 – 1997 .....	33
Average Number of Fires by Month 1988 – 1997 .....	34
Averages Fire Loss by Month 1988 – 1997 .....	34
Average Number of Fires by Day of Week 1988 – 1997 .....	35
Average Fire Loss by Day of Week 1988 – 1997 .....	35

Average Number of Fires by Hour of Day 1988 – 1997 .....	36
Average Fire Loss by Hour of Day 1988 – 1997 .....	36
Fires by Loss Category – 1997 .....	37
1997 Large Loss Fires (\$500,000 and Over).....	37
Fire Losses by Major Property Classifications – 1997 .....	38
Property Losses Related to Area of Origin – 1997 .....	41
Property Losses Related to Act or Omission – 1997 .....	43
Property Losses Related to Source of Ignition – 1997 .....	45
Property Losses Related to Fuel or Energy – 1997 .....	47
Property Losses Related to Material First Ignited – 1997 .....	59
Property Losses Related to Initial Detection – 1997 .....	51
Fires by Method of Fire Control and Extinguishment – 1997 .....	52

### **SECTION 3 – ALBERTA HOME FIRE LOSSES**

Home Fires by Type of Home – 1997 .....	57
Home Fires by Major Areas of Fire Origin – 1997 .....	57
Home Fires by Major Areas of Fire Origin and Sources of Ignition – 1997 .....	58
Home Fires by Major Ignition Scenarios – 1997 .....	60
Major Causes of Home Fires in Alberta – 1997 .....	67
Major Causes of Home Fires in Alberta 1993 – 1997 .....	68
Home Fires by Smoke Alarm Operation – 1997 .....	69
Trends in Alberta Home Fires 1988 – 1997 .....	71

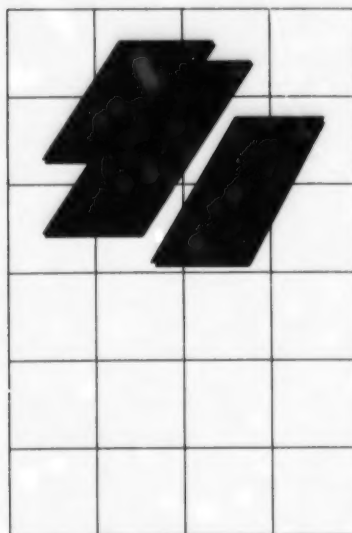
### **SECTION 4 – MUNICIPAL FIRE LOSS STATISTICS**

Municipal Fire Loss Statistics for the Year Ending December 31, 1997 and for the 10-Year Period.....	75
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### **SECTION 5 – GLOSSARY**

Glossary .....	89
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# Introduction

**Fire Commissioner's  
Statistical Report**

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## 78<sup>TH</sup> STATISTICAL REPORT OF THE FIRE COMMISSIONER



A total of 6,671 fires were recorded for the province in 1997. These fires resulted in 24 fire deaths, 13 deaths involving fire (see glossary), 443 injuries and \$ 141.5 million in property losses. Compared to 1996, fire incidents increased by 6 percent, the number of fire deaths decreased by 42 percent, deaths involving fire increased by 46 percent, the number of fire injuries decreased by 2 percent, and the dollar losses increased by 15 percent in 1997.

Homes, representing one and two family dwellings, apartments/tenements and mobile homes, accounted for a total of 1,652 fires causing a total of 20 fire deaths and no deaths involving fire, 279 injuries and \$52.1 million in property losses. In 1997, 54 percent of all fire deaths and 63 percent of all fire injuries occurred in home fires. The most notable event in home fires was the large number (12 in total) of fatalities, in mobile homes. Smoke alarms were installed in 60 percent of the homes that had fires. Of these, only 45 percent activated during fires. Thirty-five percent of the alarms did not activate due to lack of a power source -- no battery (22 percent), dead (5 percent), electricity off (4 percent) and electricity not connected (4 percent).

All 24-fire deaths for 1997 were in civilians, 14 were male and 10 were female. Of these, the largest group (6) of fatalities was over 65 years of age. Also, five children under 15 died in fires in 1997. Two sets of multiple fatalities--a family of four (male, 33 years; female, 29 years; male, 9 years; female, 7 years) and a family of three (female, 28 years; female, 2 years; and male, 1 year)--contributed seven fatalities to the total of 12 fatalities recorded in mobile home fires.

The major functions and challenges of the Fire Commissioner's Office during 1997, relevant to this statistical report, are outlined below:

### Fire Loss Statistics

Two reports focusing on the high risk of fire to residents of mobile homes and rural Alberta communities were researched, developed and published in 1997. The mobile home study was initiated after a large number of persons living in mobile homes perished in fires during the first quarter of the year. The study, which spanned the five-year period 1991 to 1995, revealed:

- Most fires (54 percent), deaths (52 percent), and injuries (58 percent) due to fire occurred in mobile homes constructed in 1978 or before.
- Seventy-two percent of mobile home fires occurred in rural Alberta. Of these homes 75 percent were constructed prior to 1978.
- 1978 marked the year when Canadian Standards Association (CSA) published the Standard Z240.2.1-1978 Structural Requirements for Mobile Homes.
- In Alberta, mobile homes are required to be manufactured in accordance with the

requirements of Part 9 of the Alberta Building Code, which came into effect in May 1981.

- The lightweight construction which made for easy transport (especially in order units not conforming to CSA Standards or Alberta Building Code) are the very features that contribute to a rapid fire spread and build up of toxic smoke and gases in mobile homes.
- Once out of control, a mobile home fire is more likely to extend to the entire structure. Statistics indicate in 50 percent of mobile home fires, the entire structure was engulfed by flames.
- Occupants of mobile homes have a higher risk of fire deaths and property loss from fire compared to those living in other homes—one and two family dwellings and apartments.
- The risk of fire deaths per 100,000 homes is 4 to 1 in mobile homes compared to other homes.
- Smoke alarms were installed in only 30 percent of rural mobile homes that experienced fire.

An article detailing these research findings titled, "Fire Risk in Mobile Homes," was published in the 1997 June issue of *Firefighting in Canada*.

A comparative study of fire losses between urban (Edmonton, Calgary, Fort McMurray, Grande Prairie, Lloydminster, Red Deer, Medicine Hat, Lethbridge, Sherwood Park, Camrose, Drumheller, Wetaskiwin, St. Albert, Leduc, Airdrie, Fort Saskatchewan and Spruce Grove) and rural (all municipalities other than urban and First Nations communities) was conducted for the five year period, 1992 - 1996. This study, revealed:

- The risks of fire incidence, fire death and dollar loss were 1.2, 2.4, and 3.4 times higher in rural compared to urban municipalities. When rural vs. urban were compared by the number of deaths per 100 fires, rural (0.6) was nearly twice that of urban (0.32). On the other hand, fire injury rate was 1.7 times higher in urban than in rural municipalities.
- Home fires accounted for the majority of deaths and injuries in both urban and rural communities.
- Most urban home fires were related to cooking (31 percent), while both cooking (18 percent) and heating equipment fires (18 percent) ranked first in rural home fires. Urban homes experienced more than double the frequency of cooking oil related fires than rural.

The second most common cause of home fires was related to heating equipment in rural and to smoking in urban. Arson/set fires accounted for more home fires in urban (10 percent) than in rural (6 percent). The proportion of home fires classified as unknown was 2.5 times higher in rural than in urban. Examination of heating equipment fires did not reveal any major differences. The majority of these fires were related to central heating furnaces in both rural and urban.

- In terms of response times, urban fire departments responded to 77 percent of the fires within 4-5 minutes and to 97 percent of the fires within 6-8 minutes. The response times of rural fire departments were more spread-out with only 24 percent of the fires responded to within 4-5 minutes and 43 percent within 6-8 minutes.

- Arson/set fires was the leading act or omission (28 percent) in urban and only the fourth leading act or omission (9 percent) in rural areas. Mechanical, electrical failure or malfunction ranked second in urban (26 percent) and first in rural (30 percent). Unknown acts or omissions ranked second in rural (24 percent) and fifth in urban (8 percent).
- Rural and urban homes, which experienced fires, differed remarkably in the percent of homes with smoke alarms installed. In rural municipalities, 65 percent of the homes were not equipped with smoke alarms and in urban, 28 percent. Of the installed alarms only 38 percent (rural) and 35 percent (urban) activated during fires.

A detailed report of the above study titled, "Rural Albertans face Higher Risks from Fires," appeared in the November 1997 issue of *Alberta Fire News*.

In 1997, the Alberta fire loss statistics were placed for the first time on the Internet at the Alberta Labour website. The statistics provided an overview of fire losses and fire trends in the province in the preceding 10-year period.

### **Public Education/Information Programs**

The major public fire safety campaigns during 1997 were, Fire Prevention Week Campaign in October, the Christmas Fire Safety Campaign, the Rural Fire Watch campaign and public notification of the high fire risk to residents of older mobile homes. The theme for Fire Prevention Week "Know When to Go: React Fast to Fire!" was promoted Alberta-wide, along with awareness information on all aspects of fire safety through partnerships with the fire service and the media. A campaign kit was designed to inform the public about proper fire emergency response whether at home or

in public settings. In addition, the kit also included articles on major fire problems in homes, burn safety and fire loss statistics. The campaign kit received broader access by being placed on the Internet at the Alberta Labour website. Through a partnership with 35 radio and several TV stations, a smoke alarm contest was conducted during Fire Prevention Week. A question and answer list was provided to each station and listeners/viewers who called in with the correct answer received a smoke alarm provided by First Alert (BRK Brands Canada, Rexdale, Ontario.)

The year long "Rural Fire Watch" campaign was launched in November 1997 in cooperation with 34 weekly newspapers throughout the province. A series of advertisements, each focussing on a major fire problem in rural communities, was developed by the Fire Commissioner's Office and supplied to participating newspapers.

### **Public Education Materials and Fire Prevention Literature**

Approximately 195,000 pieces of public fire safety information pamphlets, cards and booklets, covering a wide range of fire problems, were distributed throughout the province with the assistance of the fire service and other safety organizations/professionals. A fire hydrant robot and three back-drop display units, depicting home fire safety, and Sparky costumes were made available to fire departments conducting education programs.

Alberta Fire News was published in May and November. Approximately 2,200 copies of each issue were distributed to municipal fire departments, insurance industry, industrial and hospital fire departments, municipal administrators and

other individuals and organizations. The newsletter covered significant fire problems as well as other timely fire safety issues in Alberta.

### **The Learn Not To Burn Curriculum**

Members of the Public Fire Safety Education Committee of Alberta Fire Chiefs Association and Alberta Labour staff attended ten annual teachers' conventions. The conventions provided a venue for one-on-one discussions with elementary school teachers on the value of Learn Not To Burn (LNTB) and to answer any questions.

Videos in support of LNTB were made available to schools through 13 Media Resource Centres located throughout the province. In addition, a large number of "Sparky's ABC's" video was purchased at a bulk discount rate for distribution throughout the province.

A series of LNTB workshops were held across the province for the fire service and elementary school teachers. Attendance was high and approximately 70 fire departments participated.

### **Alberta Weekly Newspaper Association (AWNA) Contest**

One newspaper publisher in each of the three circulation categories – under 2,500; 2,501 – 5,000; over 5,000, were awarded prizes to recognize outstanding coverage of the 1997 Fire Prevention Week. The winning newspapers were Slave Lake Lakeside Leader, Airdrie Echo, and Leduc Representative. Honourable Mention Certificates were presented to Nanton News, Provost News, The Sedgewick Community Press, The Redwater Review, Wetaskiwin Times Advertiser and St. Paul Journal. Awards were presented by the Fire Commissioner at the Annual AWNA Symposium in January 1998. One

newspaper from the winners also received a Weekend Get-Away-for-Two package at the Fantasyland Hotel in West Edmonton Mall, courtesy of the Alberta Fire Chiefs Association.

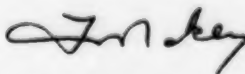
### **Partnerships**

Partnerships and networking opportunities with other safety organizations continued to be pursued with much mutual benefit. These involved the Injury Prevention Centre at the University of Alberta, the Alberta Fire Chiefs Association, the Alberta Weekly Newspaper Association; nationally and internationally, with the Council of Canadian Fire Marshals and Fire Commissioners, Fire Prevention Canada, Canadian Association of Fire Chiefs, National Fire Protection Association (USA), International Fire Service Training Association, the International Society of Fire Service Instructors and the Canadian Tire Child Protection Foundation.

### **The Alberta Fire Training School**

In 1997 the Fire Commissioner continued to hold the provincial accreditation for fire training jointly with the Alberta Fire Training School in Vermilion. The school provided training in all fire service career paths including fire prevention.

The Safety Codes Act, and the regulations under the Act, forms the legal framework for fire prevention, but fire prevention is everyone's responsibility. Even the smallest fire prevention action by an individual can have a pronounced effect on fire safety in Alberta. By working together, we can collectively reduce the incidence and severity of fire in our province.



Tom Makey



# **SECTION 1**



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## **Alberta Fire Casualties**

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**Fire Commissioner's  
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## FIRE DEATHS 1988 - 1997

YEAR	CHILD		ADULT		TOTAL
	FEMALE	MALE	FEMALE	MALE	
1988	1	3	7	29	40
1989	5	6	8	12	31
1990	3	5	8	17	33
1991	6	3	8	20	37
1992	3	3	2	9	17
1993	1	6	11	11	29
1994	1	.	5	16	22
1995	4	6	6	15	31
1996	1	3	8	22	34
1997	3	2	7	12	24
TOTAL	28	37	70	163	298

A fire death is an accidental death directly due to fire or death within one year of a fire injury.

## DEATHS INVOLVING FIRE 1988 - 1997

YEAR	CHILD		ADULT		TOTAL
	FEMALE	MALE	FEMALE	MALE	
1988	1	.	5	13	19
1989	.	.	2	13	15
1990	1	3	3	8	15
1991	2	1	1	10	14
1992	.	.	1	7	8
1993	.	1	1	5	7
1994	.	.	.	3	3
1995	.	.	1	4	5
1996	1	.	.	6	7
1997	.	2	3	8	13
TOTAL	5	7	17	77	106

A death involving fire is a death from causes other than fire, but occurs at a fire incident.

# Fire Deaths by Geographic Location — 1997

Stettler	1
Beaver Cty #9	1
St. Paul Cty #19	2
Red Deer Cty #23	1
Vermilion	1
Vegreville	1
Flagstaff Cty #29	1
Bonnyville M.D. #87	2
Sturgeon M.D. #90	1
Yellowhead M.D. #94	4
Greenview M.D. #16	2
Indian Reserves	4
Calgary City	6
Edmonton City	5
Lloydminster City	1
Red Deer City	3
Wetaskiwin City	1



## Death Rates

Year	Population	Fire Deaths	Other Deaths Involving Fire	Total Deaths	Fire Death Rate*	Fire Death Rate*
1988	2,463,022	40	19	59	1.6	2.0
1989	2,504,337	31	15	46	1.2	1.9
1990	2,556,405	33	15	48	1.3	1.7
1991	2,601,289	37	14	51	1.4	1.4
1992	2,647,365	17	8	25	0.6	1.4
1993	2,686,895	29	7	36	1.1	1.4
1994	2,717,178	22	3	25	0.8	1.3
1995	2,753,329	31	5	36	1.1	1.4
1996	2,793,263	34	7	41	1.2	.
1997	2,847,006	24	13	37	0.8	.

Alberta

Canada

\*Fire Deaths per 100,000 population

## FATAL CASUALTIES BY STATUS, SEX AND AGE - 1997

### Fire Deaths

STATUS AND SEX OF CASUALTY		AGE IN YEARS								TOTAL
		0-5	6-15	16-25	26-35	36-45	46-55	56-65	OVER 65	
CIVILIAN	FEMALE	2	1	1	2	.	.	1	3	10
	MALE	1	1	3	1	3	1	1	3	14
TOTAL DEATHS		3	2	4	3	3	1	2	6	24

Commentary: On average, one fire death occurred for every 15.2 days. The male:female ratio for death is 1.4:1.

## INJURED CASUALTIES BY STATUS, SEX AND AGE - 1997

### Fire Injuries

STATUS AND SEX OF CASUALTY		AGE IN YEARS									TOTAL
		UNKNOWN	0-5	6-15	16-25	26-35	36-45	46-55	56-65	OVER 65	
FIREFIGHTER		2	.	.	.	.	.	.	.	.	2
	FEMALE	.	.	.	.	.	.	1	.	.	1
	MALE	3	.	.	5	16	46	34	1	.	105
CIVILIAN	FEMALE	11	7	11	15	16	15	12	6	11	104
	MALE	35	17	15	38	44	35	24	11	12	231
TOTAL INJURIES		51	24	26	58	76	96	71	18	23	443

Commentary: On average, there were 1.2 injuries per day in 1997. The highest number of injuries (96) occurred in the 36 - 45 age group.

## CONDITION OF FATAL CASUALTIES - 1997

CONDITION OF CASUALTY	NO.	%
ASLEEP AT TIME OF FIRE	7	29.2
IMPAIRED: ALCOHOL/DRUGS/MEDICN.	4	16.7
AWAKE AND NORMAL	5	20.8
CONDITION OF CASUALTY-UNKNOWN	7	29.2
CONDITION OF CASUALTY-UNCLASSIFIED	1	4.2
TOTAL	24	100.0

Commentary: Twenty-nine percent of fatal casualties were asleep at the time of the fire.

## ACTION OF FATAL CASUALTIES - 1997

ACTION OF CASUALTY	NO.	%
ENTERED/REMAINED FOR FIREFIGHTING	1	4.2
ENTERED/REMAINED TO SAVE PROPERTY	1	4.2
LOSS OF JUDGMENT/PANIC	2	8.3
RECEIVED DELAYED WARNING	3	12.5
DID NOT ACT	9	37.5
ACTION OF CASUALTY-UNKNOWN	7	29.2
ACTION OF CASUALTY-UNCLASSIFIED	1	4.2
TOTAL	24	100.0

Commentary: Of the known actions of fire fatalities 38% did not act and 13% received delayed warning.

## CONDITION OF INJURED CASUALTIES - 1997

CONDITION OF CASUALTY	NO.	%
ASLEEP AT TIME OF FIRE	54	12.2
BEDRIDDEN/PHYSICAL HANDICAP	4	0.9
IMPAIRED: ALCOHOL/DRUGS/MEDICN.	20	4.5
AWAKE AND NORMAL	240	54.2
UNDER RESTRAINT OR DETENTION	3	0.7
TOO YOUNG TO REACT TO FIRE	6	1.4
MENTAL HANDICAP (SENILE)	2	0.5
CHILDREN LEFT UNATTENDED	1	0.2
CONDITION OF CASUALTY-UNKNOWN	64	14.4
CONDITION OF CASUALTY-UNCLASSIFIED	49	11.1
TOTAL	443	100.0

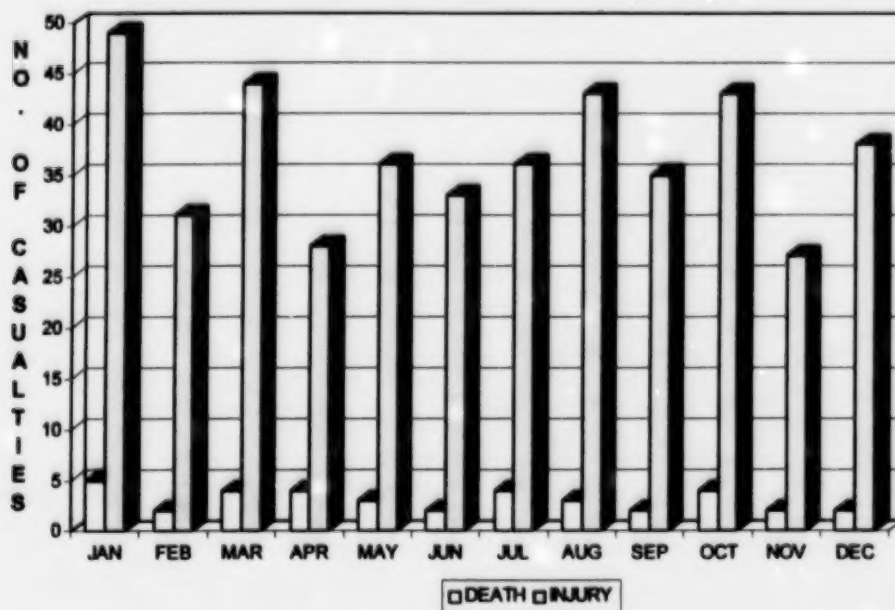
Commentary: The majority of injured casualties (54%) were awake and normal, while 12% were asleep at the time of fire.

## ACTION OF INJURED CASUALTIES - 1997

ACTION OF CASUALTY	NO.	%
INJURED WHILE ATTEMPTING ESCAPE	60	13.5
OVEREXERTION, HEART ATTACK	2	0.5
ENTERED/REMAINED FOR RESCUE PURPOSES	20	4.5
ENTERED/REMAINED FOR FIREFIGHTING	141	31.8
ENTERED/REMAINED TO SAVE PROPERTY	15	3.4
LOSS OF JUDGMENT/PANIC	14	3.2
RECEIVED DELAYED WARNING	16	3.6
DID NOT ACT	39	8.8
ACTION OF CASUALTY-UNCLASSIFIED	73	16.5
ACTION OF CASUALTY-UNKNOWN	63	14.2
TOTAL	443	100.0

Commentary: The majority of fire injuries (32%) happened when person(s) entered/remained for firefighting purposes.

## FIRE CASUALTIES BY MONTH - 1997



## FIRE CASUALTIES BY TIME PERIOD - 1997

TIME PERIODS	TYPE OF CASUALTY			
	ALL INJURIES		FIRE DEATHS	
	NO.	%	NO.	%
10:30PM-6:29AM	151	34.1	9	37.5
2:30PM - 10:29PM	150	33.9	6	25.0
6:30AM - 2:29PM	142	32.1	9	37.5
TOTAL	443	100	24	100

**Commentary:** The majority of fire deaths occurred between the hours 10:30 p.m. – 6:29 a.m. (38%) and 6:30 a.m. – 2:29 p.m. (38%), while injuries were almost equally distributed among the three time periods.

# **FIRE DEATHS BY MAJOR PROPERTY CLASSIFICATION - 1997**

PROPERTY CLASSIFICATION		FIRE DEATHS		DEATHS INVOLVING FIRE	
		NO.	%	NO.	%
RESIDENTIAL	MOBILE HOMES	12	50.0	.	.
	ONE AND TWO FAMILY DWELLINGS	6	25.0	.	.
	APARTMENTS	2	8.3	.	.
	MOTOR HOTEL/MOTEL (OVER 20 UNITS)	1	4.2	.	.
	CAMPER ON/OFF TRUCK	1	4.2	.	.
	SUB TOTAL	22	91.7	.	.
SPECIAL PROPERTY-TRANSPORTATION EQUIPMENT	INDUSTRIAL TRUCK/FORKLIFT	.	.	2	15.4
	BUS/TRACKLESS TROLLEY	.	.	2	15.4
	GENERAL TRUCK (NON-FLAMMABLE CARGO)	.	.	2	15.4
	AUTOMOBILE (INCLUDES CAR/AMBULANCE)	.	.	2	15.4
	OUTDOOR PROPERTY-UNCLASS.	1	4.2	.	.
	BUILDING UNDER MAJOR RENOVATION	.	.	1	7.7
	SEMI-TRAILER TRUCK	.	.	1	7.7
	BRUSH/GRASS/LIGHT GROUND COVER/OPEN LAND	1	4.2	.	.
	SUB TOTAL	2	8.3	10	76.9
MERCANTILE	GENERAL MAINTENANCE SHOP	.	.	1	7.7
	SUB TOTAL	.	.	1	7.7
INSTITUTIONAL	MENTAL HOSPITAL	.	.	1	7.7
	SUB TOTAL	.	.	1	7.7
INDUSTRIAL MANUFACTURING PROPERTIES	IRON/STEEL MFG.	.	.	1	7.7
	SUB TOTAL	.	.	1	7.7
TOTAL		24	100.0	13	100.0

Commentary: Eighty-three percent of all fire deaths occurred in homes, while 69% of deaths involving fire occurred in fires related to vehicles.



# **FIRE DEATHS BY ACT OR OMISSION – 1997**

ACT OR OMISSION		FIRE DEATHS		DEATHS INVOLVING FIRE	
		NO.	% OF TOTAL	NO.	% OF TOTAL
MISUSE OF SOURCE OF IGNITION	SMOKER'S MATERIAL	9	37.5	.	.
	THAWING	4	16.7	.	.
	WELDING OR CUTTING TOO CLOSE TO	.	.	1	7.7
	SUB TOTAL	13	54.2	1	7.7
VEHICLE ACCIDENT	AUTOMOBILE ACCIDENT	.	.	5	38.5
	INDUSTRIAL TRUCK ACCIDENT	.	.	2	15.4
	SUB TOTAL	.	.	7	53.8
HUMAN FAILING	IGNORANCE OF HAZARD	2	8.3	.	.
	PHYSICAL OR MENTAL DISABILITY	.	.	2	15.4
	IMPAIRED (SUSPECT ALCOHOL/DRUGS/MEDICN.)	1	4.2	.	.
	ASLEEP	1	4.2	.	.
	SUB TOTAL	4	16.7	2	15.4
MISUSE OF MATERIAL IGNITED	COMBUSTIBLE PLACED TOO CLOSE TO HEAT	3	12.5	.	.
	MISUSE OF MAT. IGNITED-UNKNOWN	1	4.2	.	.
	SUB TOTAL	4	16.7	.	.
INCENDIARY	SUSPECTED ARSON	.	.	.	7.7
	ARSON/SET FIRE-UNCLASSIFIED	.	.	1	7.7
	SUB TOTAL	.	.	2	15.4
MECHANICAL, ELECTRICAL FAILURE MALFUNCTION	PART WORN OUT	.	.	1	7.7
	SUB TOTAL	.	.	1	7.7
UNKNOWN	UNKNOWN	2	8.3	.	.
	SUB TOTAL	2	8.3	.	.
MISCELLANEOUS	MISCELLANEOUS-UNCLASSIFIED	1	4.2	.	.
	SUB TOTAL	1	4.2	.	.
TOTAL		24	100.0	13	100.0

Commentary: Misuse of smoker's material (38%), and thawing (17%) were the known leading acts or omissions in fire deaths. Vehicle accidents (54%) accounted for the most number of deaths involving fire.



# **FIRE DEATHS BY IGNITION SCENARIOS - 1997**

## *One and Two Family Dwellings*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
STOVE/TOP BURNER (FIRE IN PAN)	IMPAIRED (SUSPECT ALCOHOL/DRUGS/MEDICN.)	MATERIAL FIRST IGNITED-UNKNOWN	1
CANDLE, TAPER	IGNORANCE OF HAZARD	CARDBOARD, CARDBOARD ITEMS	1
CIGARETTE	SMOKER'S MATERIAL	INTERIOR WALL COVER:NOT PLASTIC	1
		BEDDING	2
UNKNOWN	UNKNOWN	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			6

## *Apartments*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
CANDLE, TAPER	ASLEEP	CLOTHING/TEXTILES-UNKNOWN	1
CIGARETTE	SMOKER'S MATERIAL	FURNITURE (UPHOLSTERED)	1
SUB TOTAL			2

## *Motor Hotel/Motel (Over 20 Units)*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
CIGARETTE	SMOKER'S MATERIAL	FURNITURE (UPHOLSTERED)	1
SUB TOTAL			1

## *Mobile Homes*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
NO IGNITING OBJECT	MISCELLANEOUS-UNCLASSIFIED	MATERIAL FIRST IGNITED-UNKNOWN	1
STOVE/TOP BURNER (OTHER CIRCUMSTANCES)	COMBUSTIBLE PLACED TOO CLOSE TO HEAT	UNCLASSIFIED	3
PORTABLE SPACE HEATER	THAWING	MATERIAL FIRST IGNITED-UNKNOWN	4
CIGARETTE	SMOKER'S MATERIAL	FURNITURE (UPHOLSTERED)	2
		FLAMMABLE GAS-UNCLASSIFIED	1
UNKNOWN	MISUSE OF MAT. IGNITED-UNKNOWN	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			12

# **FIRE DEATHS BY IGNITION SCENARIOS - 1997**

## *Camper On/Off Truck*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
CIGARETTE	SMOKER'S MATERIAL	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			1

## *Brush/Grass/Light Ground Cover/Open Land*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
UNKNOWN	UNKNOWN	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			1

## *Outdoor Property-Unclassified.*

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
MATCH	IGNORANCE OF HAZARD	GASOLINE	1
SUB TOTAL			1

TOTAL FIRE DEATHS			24
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Commentary: Careless use of smoker's materials leading to ignition of upholstered furniture/bedding, and other materials was the leading ignition scenario in fire deaths (38%).

# DEATHS INVOLVING FIRE BY IGNITION SCENARIOS - 1997

## Mental Hospital

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
MATCH	PHYSICAL OR MENTAL DISABILITY	CLOTHING: COTTON	1
SUB TOTAL			1

## General Maintenance Shop

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
WELDING EQUIPMENT	WELDING OR CUTTING TOO CLOSE TO	FLAMMABLE LIQUID (FLASH PT<=37C): SOLVENT	1
SUB TOTAL			1

## Iron/Steel Manufacturing

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
APPLIANCES/EQUIPMENT- UNCLASSIFIED	PART WORN OUT	CHEMICALS/PLASTICS/METALS- UNCLASSIFIED	1
SUB TOTAL			1

## Building Under Major Renovation

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
MATCH	SUSPECTED ARSON	FLAMMABLE/COMBUSTIBLE LIQUID- UNCLASSIFIED	1
SUB TOTAL			1

## Automobile (Includes Car/Ambulance)

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
MATCH	ARSON/SET FIRE-UNCLASSIFIED	GASOLINE	1
UNKNOWN	PHYSICAL OR MENTAL DISABILITY	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			2

## Bus/Trackless Trolley

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
BATTERY/RECTIFIER/CHARGER	AUTOMOBILE ACCIDENT	GASOLINE	2
SUB TOTAL			2

## DEATHS INVOLVING FIRE BY IGNITION SCENARIOS - 1997

### General Truck (Non-Flammable Cargo)

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
BATTERY/RECTIFIER/CHARGER	AUTOMOBILE ACCIDENT	GASOLINE	1
UNKNOWN	AUTOMOBILE ACCIDENT	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			2

### Semi-Trailer Truck

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
UNKNOWN	INDUSTRIAL TRUCK ACCIDENT	FUEL OIL: GRADES 1-6/KEROSENE	1
SUB TOTAL			1

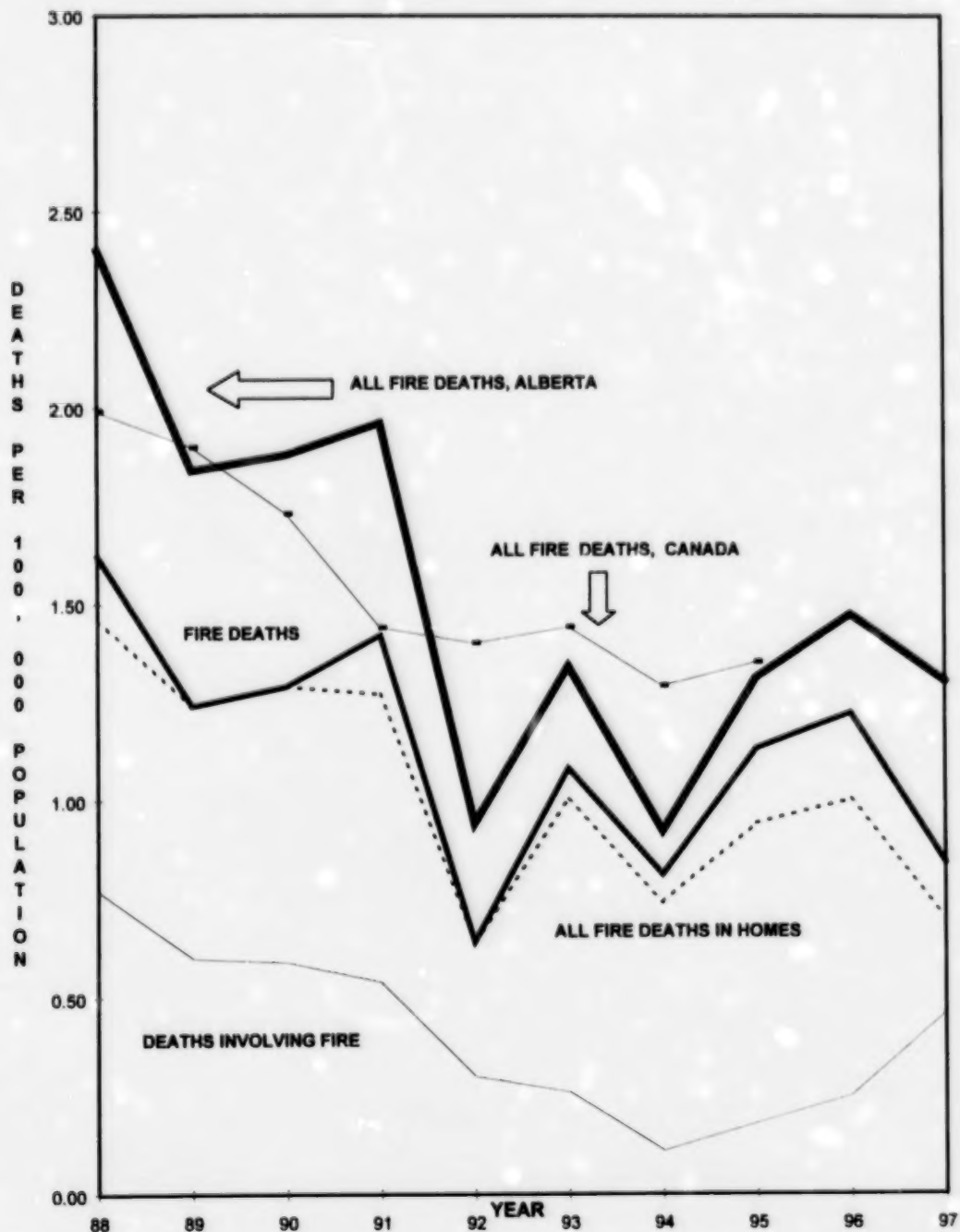
### Industrial Truck/Forklift

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	DEATHS
UNKNOWN	AUTOMOBILE ACCIDENT	DIESEL	1
	INDUSTRIAL TRUCK ACCIDENT	MATERIAL FIRST IGNITED-UNKNOWN	1
SUB TOTAL			2

TOTAL DEATHS INVOLVING FIRE	13
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Commentary: Seven out of 13 deaths involving fire were in vehicle accidents (54%). Gasoline or other flammable/combustible liquid was the material first ignited in fires involving five of these fatalities.

## TRENDS IN ALBERTA FIRE DEATHS 1988 - 1997



**Commentary:** The rates of all fire deaths (sum of fire deaths and deaths involving fire) in Alberta declined between 1987 and 1992, but have fluctuated since. Fire deaths in homes also reflect this pattern. The lowest recorded fire death rates for the province were in 1992 and 1994. Except in 1989 and 1992 - 1995 the rates for all fire deaths in Alberta have been higher than in Canada.

# **FIRE INJURIES BY MAJOR PROPERTY CLASSIFICATION - 1997**

PROPERTY CLASSIFICATION		MINOR INJURY	LIGHT INJURY	SERIOUS INJURY	TOTAL	% OF TOTAL
ASSEMBLY	ICE RINK/CURLING RINK	1	.	.	1	0.2
	RESTAURANT/CAFE/DINER	.	3	.	3	0.7
	DRIVE-IN FOOD/BEVERAGE SERVICE	.	1	.	1	0.2
	AMUSE./RECREATION PLACE-UNCLASSIFIED	1	.	.	1	0.2
	SUB TOTAL	2	4	.	6	1.4
INSTITUTIONAL	REFORMATORY/JUVENILE DETENTION HOME	.	2	.	2	0.5
	GENERAL HOSPITAL	1	.	.	1	0.2
	CLINIC/CLINIC TYPE INFIRMARY	1	.	.	1	0.2
	SUB TOTAL	2	2	.	4	0.9
RESIDENTIAL	ONE AND TWO FAMILY DWELLINGS	101	47	9	157	35.4
	APARTMENTS	66	34	10	110	24.8
	ROOMING/BOARD./LODG. HOUSE (4-8 PEOPLE)	1	.	.	1	0.2
	HOTEL/INN/LODGE (YEAR ROUND USE)	3	.	1	4	0.9
	MOTOR HOTEL/MOTEL (OVER 20 UNITS)	2	.	.	2	0.5
	BUNKHOUSE/WORKER'S BARRACKS	1	.	.	1	0.2
	MOBILE HOMES	6	4	2	12	2.7
	TRAVEL/HOLIDAY TRAILER	.	3	.	3	0.7
	SUB TOTAL	180	88	22	290	65.5
MERCANTILE	SUPERMARKET (OVER 1000 SQ. M)	2	1	.	3	0.7
	GROCERY STORES (LESS THAN 1000 SQ. M)	.	1	.	1	0.2
	SPECIALTY FOOD STORE	2	.	.	2	0.5
	GENERAL MAINTENANCE SHOP	2	.	.	2	0.5
	FUEL SERVICE STATION (PUBLIC)	1	.	.	1	0.2
	VEHICLE REPAIR/PAINT SHOP	3	1	2	6	1.4
	LARGE VARIETY STORE (> 1000 SQ. M)	1	.	.	1	0.2

(CONTINUED)

# **FIRE INJURIES BY MAJOR PROPERTY CLASSIFICATION - 1997**

PROPERTY CLASSIFICATION		MINOR INJURY	LIGHT INJURY	SERIOUS INJURY	TOTAL	% OF TOTAL
MERCANTILE	SUB TOTAL	11	3	2	16	3.6
INDUSTRIAL MANUFACTURING PROPERTIES	PLASTIC MATERIAL MFG.	.	1	.	1	0.2
	PLASTIC PRODUCTS MFG.	9	1	.	10	2.3
	PETROLEUM REFINERIES	1	.	.	1	0.2
	IRON/STEEL MFG.	1	1	2	4	0.9
	METAL PRODUCTS MFG.	1	1	.	2	0.5
	SLAUGHTER/MEAT PRESERVING	.	1	.	1	0.2
	SUB TOTAL	12	5	2	19	4.3
STORAGE PROPERTIES	ELEVATORS/GRAIN (COMMERCIAL)	1	.	.	1	0.2
	PAPER/(PRODUCT) STORAGE	1	2	.	3	0.7
	INDIVIDUAL AUTO PARKING GARAGE	12	8	1	21	4.7
	GENERAL AUTO PARKING GARAGE/LOT	1	.	.	1	0.2
	BUS/TRUCK/AUTO DEALER/CAB PARKING GARAGE	.	1	.	1	0.2
	WAREHOUSE (GENERAL)	2	2	.	4	0.9
	STORAGE PROPERTIES-UNCLASSIFIED	1	.	.	1	0.2
	SUB TOTAL	18	13	1	32	7.2
SPECIAL PROPERTY-TRANSPORTATION EQUIPMENT	BRUSH/GRASS/LIGHT GROUND COVER/OPEN LAND	9	1	.	10	2.3
	TREES/SHRUBS (INDIVIDUAL)	1	.	.	1	0.2
	TRASH/RUBBISH (INCLUDES CONTAINERS)	.	1	1	2	0.5
	BUILDING UNDER CONSTRUCTION	1	4	.	5	1.1
	FREIGHT/BOX/TANK/HOPPER RAILWAY CAR	1	.	.	1	0.2
	AUTOMOBILE (INCLUDES CAR/AMBULANCE)	4	4	3	11	2.5
	BUS/TRACKLESS TROLLEY	2	.	.	2	0.5
	FLAMM. LIQUID/CHEMICAL TANK TRUCK	.	.	2	2	0.5
	GENERAL TRUCK (NON-FLAMMABLE CARGO)	4	3	2	9	2.0

(CONTINUED)



## FIRE INJURIES BY MAJOR PROPERTY CLASSIFICATION - 1997

PROPERTY CLASSIFICATION		MINOR INJURY	LIGHT INJURY	SERIOUS INJURY	TOTAL	% OF TOTAL
SPECIAL PROPERTY- TRANSPORTATION EQUIPMENT	CONSTRUCTION EQUIPMENT (EXCLUDES CRANE)	.	2	.	2	0.5
	FARM TRACTOR/EQUIPMENT GRAIN DRYER/HARVEST.	1	3	.	4	0.9
	INDUSTRIAL TRUCK/FORKLIFT	1	1	.	2	0.5
	DRILLING RIG (PETRO/GAS)	.	.	1	1	0.2
	BARBEQUE	2	1	.	3	0.7
	SPECIAL VEHICLE-UNCLASS.	1	.	.	1	0.2
	RAIL TRANSPORT VEHICLE EQUIPMENT - UNCLASSIFIED	.	1	.	1	0.2
	OUTDOOR PROPERTY-UNCLASS.	4	3	3	10	2.3
	SUB TOTAL	31	24	12	67	15.1
MISCELLANEOUS PROPERTY	SHED (INC. IMPLEMENT SHED)	2	.	.	2	0.5
	PETROLEUM/NAT. GAS WELL	.	1	2	3	0.7
	QUONSET	1	.	.	1	0.2
	MISCELLANEOUS-UNCLASSIFIED	.	1	1	2	0.5
	OUTBUILDINGS-UNCLASSIFIED	.	1	.	1	0.2
	SUB TOTAL	3	3	3	9	2.0
TOTAL		259	142	42	443	100.0

Commentary: Sixty-three percent of all fire injuries occurred in homes. The majority of these were in one and two family dwellings (35%) and apartments (25%).



# **FIRE INJURIES BY ACT OR OMISSION - 1997**

ACT OR OMISSION		INJURY, MINOR	INJURY, LIGHT	INJURY, SERIOUS	TOTAL	% OF TOTAL
INCENDIARY	ARSON FOR VENGEFUL/SPITEFUL PURPOSES	2	2	.	4	0.9
	ARSON FOR OBSCURING OTHER CRIMES	1	.	.	1	0.2
	SUSPECTED ARSON	8	4	1	11	2.5
	VANDALISM, MISCHIEF, NO CHARGES LAID	3	.	.	3	0.7
	ARSON/SET FIRE-UNKNOWN	7	3	1	11	2.5
	ARSON/SET FIRE-UNCLASSIFIED	2	.	4	6	1.4
	SUB TOTAL	21	9	6	36	8.1
MISUSE OF SOURCE OF IGNITION	SMOKER'S MATERIAL	32	29	5	66	14.9
	THAWING	1	.	1	2	0.5
	INADEQUATE CONTROL OF 'OPEN' FIRE	2	.	.	2	0.5
	CHILD PLAYING WITH	20	5	.	25	5.6
	WELDING OR CUTTING TOO CLOSE TO	3	3	.	6	1.4
	TORCH TOO CLOSE TO	2	.	.	2	0.5
	MISUSE OF SOURCE OF IGNIT.-UNKNOWN	1	.	.	1	0.2
	MISUSE OF SOURCE OF IGNIT.-UNCLASSIFIED	1	4	.	5	1.1
	SUB TOTAL	62	41	6	109	24.6
MISUSE OF MATERIAL IGNITED	MISUSE OF MAT. IGNITED UNKNOWN	.	1	3	4	0.9
	FUEL SPILLED ACCIDENTALLY	2	1	1	4	0.9
	IMPROPER FUELLING TECHNIQUE	3	1	.	4	0.9
	FLAMMABLE LIQUID TO KINDLE FIRE	.	1	1	2	0.5
	CLEANING, WASHING PARTS	1	1	2	4	0.9
	OVERHEATED COOKING OIL, GREASE, WAX	27	13	2	42	9.5
	COMBUSTIBLE PLACED TOO CLOSE TO HEAT	15	1	.	16	3.6
	IMPROPER STORAGE	4	5	.	9	2.0

(CONTINUED)

# **FIRE INJURIES BY ACT OR OMISSION - 1997**

ACT OR OMISSION		INJURY, MINOR	INJURY, LIGHT	INJURY, SERIOUS	TOTAL	% OF TOTAL
MISUSE OF MATERIAL IGNITED	MISUSE OF MAT. IGNITED UNCLASSIFIED	4	1	1	6	1.4
	SUB TOTAL	56	25	10	91	20.5
MECHANICAL ELECTRICAL FAILURE, MALFUNCTION	PART FAILURE, LEAK, BREAK	9	18	1	28	6.3
	AUTOMATIC CONTROL FAILURE	2	.	.	2	0.5
	ELECTRICAL SHORT CIRCUIT	14	4	1	19	4.3
	PART WORN OUT	1	2	1	4	0.9
	MECHANICAL, ELECTRICAL FAILURE - UNKNOWN	3	1	.	4	0.9
	SUB TOTAL	29	25	3	57	12.9
CONSTRUCTION, DESIGN, INSTALLATION DEF.	INSTALLED TOO CLOSE TO COMBUSTIBLE	2	1	.	3	0.7
	OTHER INSTALLATION DEFICIENCY	1	.	.	1	0.2
	CONSTR./DESIGN/INSTA- LLN. DEF.-UNCLASSIFIED	8	.	.	8	1.8
	SUB TOTAL	11	1	.	12	2.7
HUMAN FAILING	ASLEEP	3	2	.	5	1.1
	PHYSICAL OR MENTAL DISABILITY	4	1	.	5	1.1
	ACCIDENT	8	6	2	16	3.6
	IMPAIRED (SUSPECT ALCOHOL/DRUGS/MEDICN.)	5	3	2	10	2.3
	ASLEEP (SUSPECT ALCOHOL/DRUGS/MEDICN.)	8	1	.	9	2.0
	IGNORANCE OF HAZARD	10	9	4	23	5.2
	DISTRACTED, PREOCCUPIED	1	2	.	3	0.7
	HUMAN FAILING- UNCLASSIFIED	3	1	.	4	0.9
	SUB TOTAL	42	25	8	75	16.9
VEHICLE ACCIDENT	AUTOMOBILE ACCIDENT	3	1	3	7	1.6
	SUB TOTAL	3	1	3	7	1.6
MISCELLANEOUS	MISCELLANEOUS- UNCLASSIFIED	6	.	2	8	1.8
	SUB TOTAL	6	.	2	8	1.8

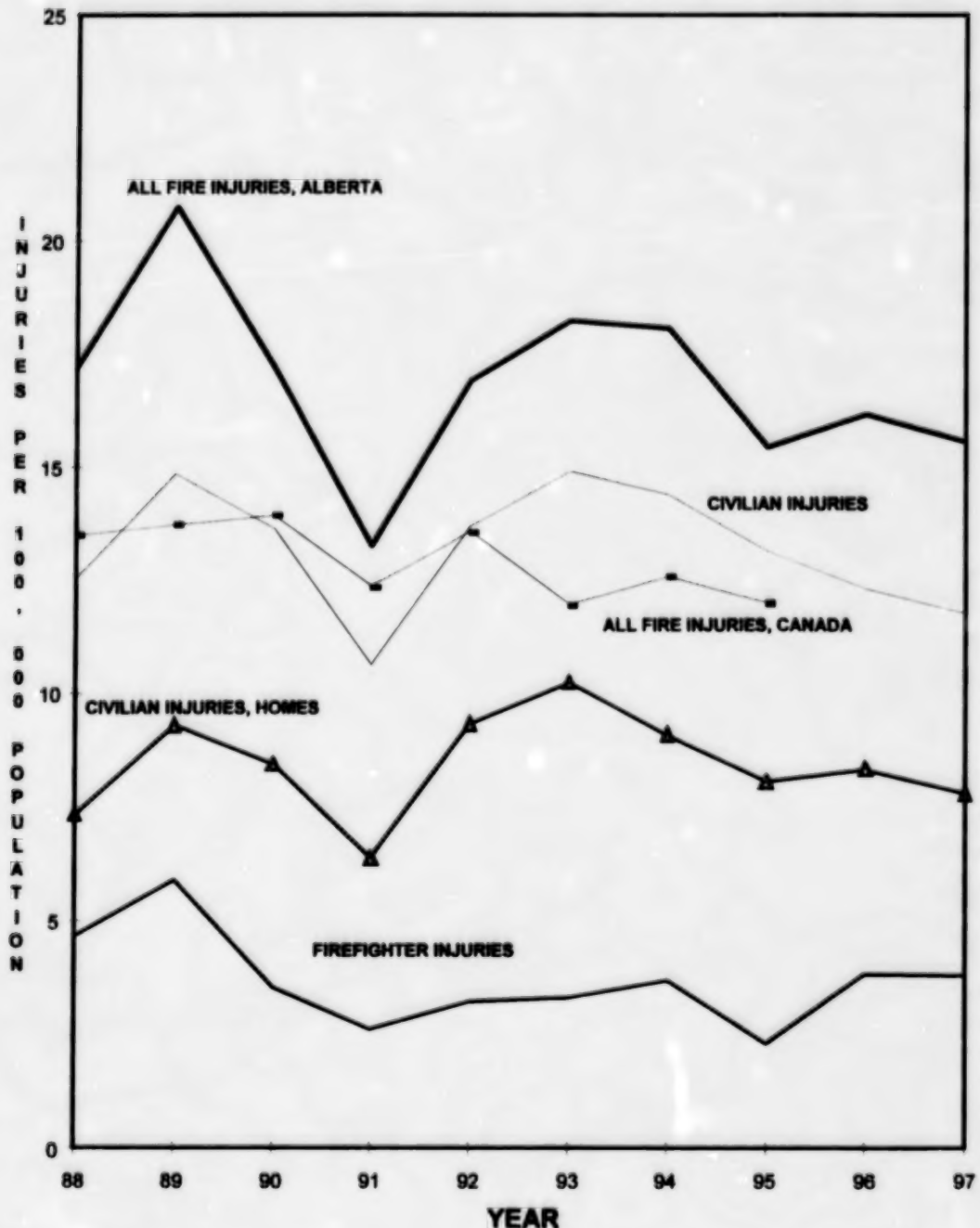
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## FIRE INJURIES BY ACT OR OMISSION - 1997

ACT OR OMISSION		INJURY, MINOR	INJURY, LIGHT	INJURY, SERIOUS	TOTAL	% OF TOTAL
UNKNOWN	UNKNOWN	29	15	4	48	10.8
	SUB TOTAL	29	15	4	48	10.8
TOTAL		259	142	42	443	100.0

Commentary: The major acts or omissions in fire injuries were: misuse of smoker's materials 15%, overheating cooking oil, grease, wax (10%), part failure leak or break (6%), and children playing with/sources of ignition (6%).

## TRENDS IN ALBERTA FIRE INJURIES 1988 - 1997



**Commentary:** Fire injury rates (sum of civilian injuries and firefighter injuries) have been consistently higher in Alberta than in Canada. With the exception of two peaks in 1989 and 1993, fire injury rates have remained relatively stable during this 1988 to 1997, 10-year period. On average there are 448 and 267 fire injuries in Alberta and in Alberta homes.

## **SECTION 2**



# **Alberta Fire Loss Information**

**Fire Commissioner's  
Statistical Report**

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## FIRE LOSSES IN ALBERTA 1988 - 1997

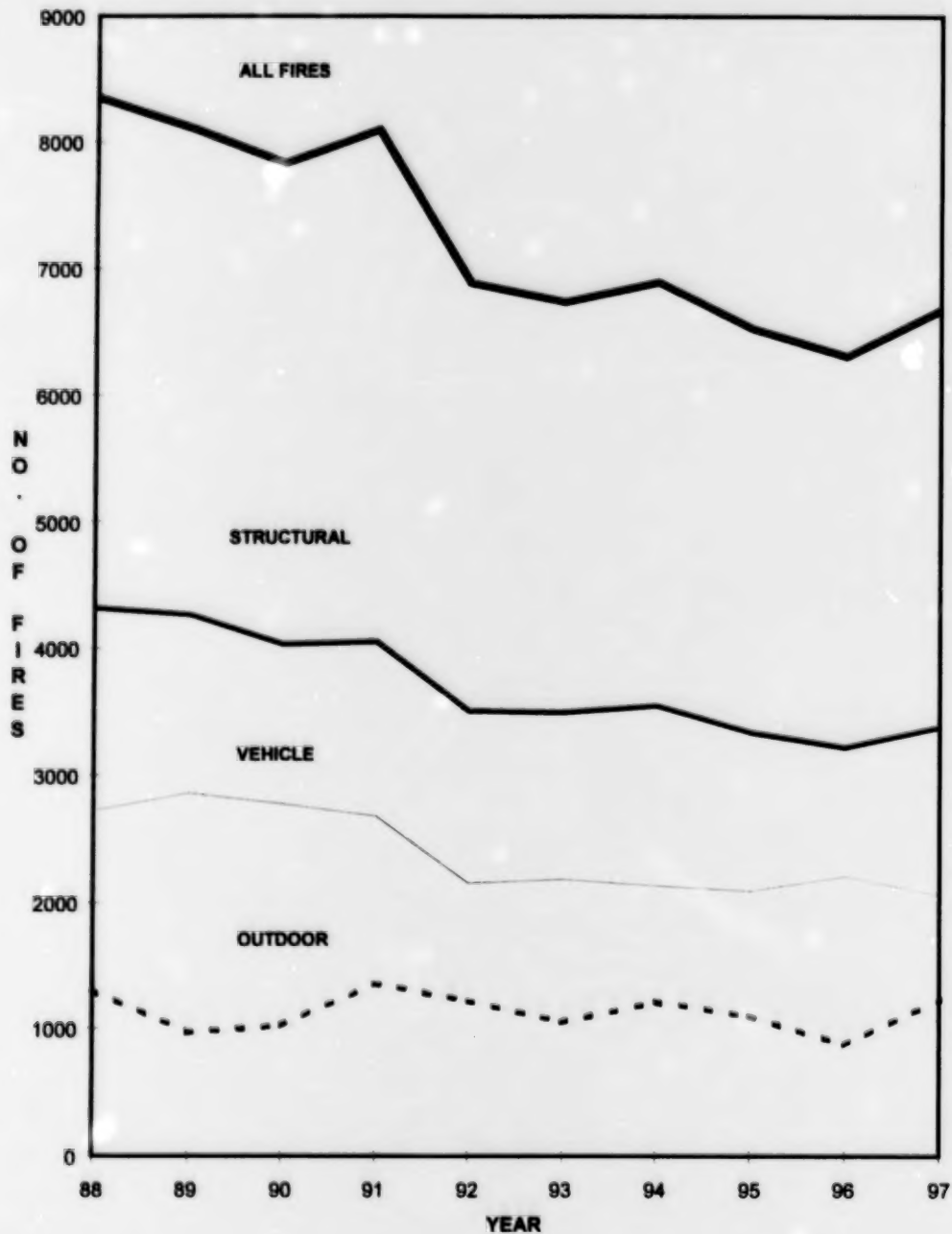
YEAR	FIRES	DEATHS	INJURIES	\$ LOSSES
1988	8,347	59	426	90,443,426
1989	8,104	46	520	123,000,705
1990	7,836	48	440	135,948,786
1991	8,097	51	345	117,713,851
1992	6,882	25	448	103,587,506
1993	6,735	36	491	103,320,281
1994	6,897	25	490	110,138,438
1995	6,528	37	424	111,140,466
1996	6,304	41	451	120,517,089
1997	6,671	37	443	141,496,029
TOTAL	72,401	405	4,478	1,157,306,579

## FIRE LOSSES IN CANADA 1988- 1997

YEAR	FIRES	DEATHS	INJURIES	\$ LOSSES
1988	71,009	535	3,630	1,018,232,771
1989	67,588	519	3,763	1,128,079,909
1990	68,007	481	3,874	1,237,393,172
1991	68,150	406	3,476	1,239,716,205
1992	65,999	401	3,874	1,241,390,000
1993	65,877	417	3,463	1,181,892,872
1994	65,716	376	3,681	1,166,889,153
1995	64,251	400	3,551	1,110,839,184
1996	.	.	.	.
1997	.	.	.	.
TOTAL	536,597	3,535	29,312	9,324,433,266
AVERAGE	67,075	442	3,664	1,165,554,158

Commentary: Compared to 1995 fire loss figures for Canada (1996 and 1997 statistics were unavailable), Alberta in 1997 accounted for 10% of incidents, 9% of deaths, 12% of injuries and 13% of \$ losses from fires in Canada.

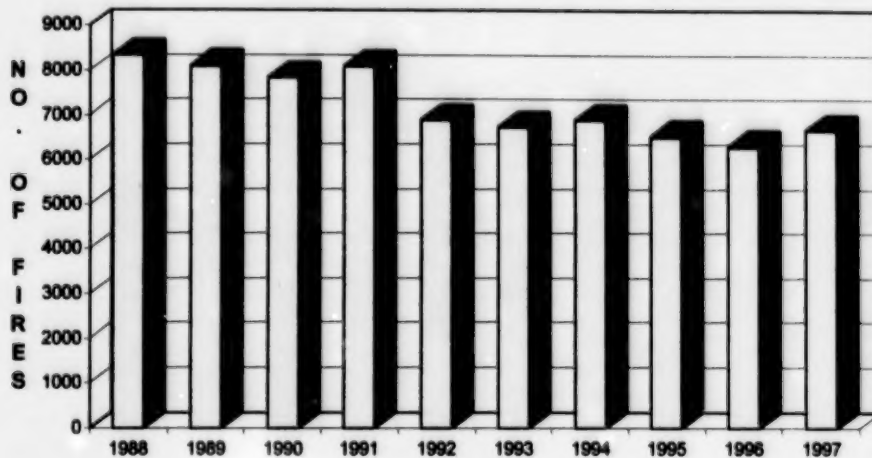
# TRENDS IN ALBERTA FIRES 1988 - 1997



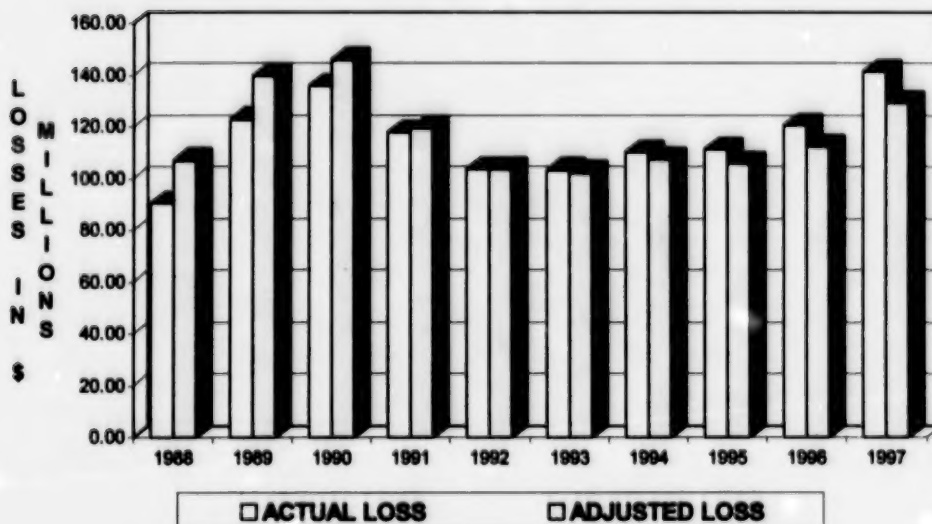
Commentary: From an annual average of 7,240 fires during 1988 - 1997, there were 3,716 structural fires (51%), 2,388 vehicle fires (33%) and 1,136 outdoor fires (16%).



## FIRES AND LOSSES 1988 - 1997



**Commentary:** The average annual number of fires for the period 1988 - 1997, is 7,240 fires. The number of fires increased from 1996 to 1997 by 6%.



**Commentary:** Adjusted losses were calculated from actual losses using the Annual Consumer Price Index (CPI) figures for Alberta from Statistics Canada. The 1992 CPI = 100.

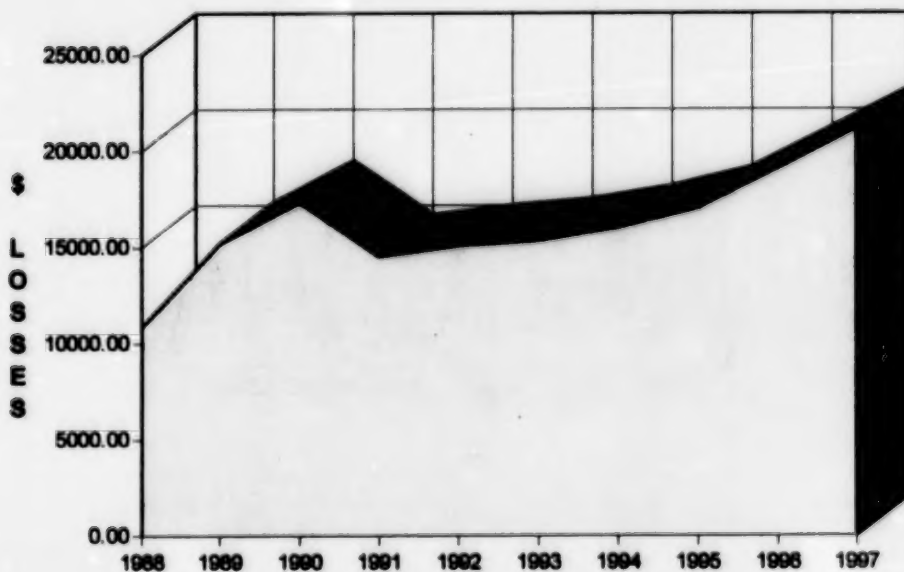
## FIRE RATES AND PER CAPITA LOSSES 1988 - 1997

YEAR	POPULATION	NUMBER OF FIRES	FIRE RATE	LOSS ESTIMATE	LOSS PER CAPITA
1988	2,463,022	8,347	3.4	90,443,428	36.7
1989	2,504,337	8,104	3.2	123,000,705	49.1
1990	2,556,405	7,836	3.1	135,948,786	53.2
1991	2,601,289	8,097	3.1	117,713,851	45.3
1992	2,647,365	6,882	2.6	103,587,506	39.1
1993	2,686,895	6,735	2.5	103,320,281	38.5
1994	2,717,178	6,897	2.5	110,139,438	40.5
1995	2,753,329	6,528	2.4	111,140,466	40.4
1996	2,793,263	6,304	2.3	120,517,089	43.1
1997	2,847,006	6,671	2.3	141,496,029	49.7

FIRE RATE = NUMBER OF FIRES PER 1000 POPULATION

Commentary: The fire rate has gradually decreased over the 10-year period. The loss per capita in 1997 was 15% higher than in 1996.

## AVERAGE LOSS PER FIRE 1988 - 1997



## FIRE LOSSES RELATED TO ECONOMIC INDICES 1988 - 1997

YEAR	FIRE LOSSES (\$)	GROSS DOMESTIC PRODUCT (\$ MILLION)	% OF GDP	PERSONAL INCOME (\$ MILLION)	% OF PERSONAL INCOME
1988	90,443,428	62,321	0.15	47,290	0.19
1989	123,000,705	65,711	0.19	50,395	0.24
1990	135,948,786	71,446	0.19	54,754	0.25
1991	117,713,851	71,306	0.17	56,978	0.21
1992	103,587,506	74,303	0.14	58,492	0.18
1993	103,320,281	81,666	0.13	60,393	0.17
1994	110,138,438	84,877	0.13	61,314	0.18
1995	111,140,466	87,647	0.13	63,796	0.17
1996	120,517,089	93,625	0.13	65,985	0.18
1997	141,496,029	101,069	0.14	68,852	0.21

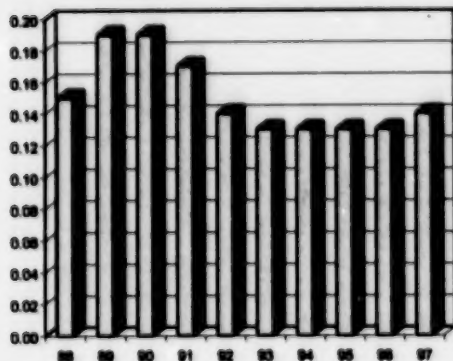
FIRE RATE = NUMBER OF FIRES PER 1000 POPULATION

**Commentary:** The Gross Domestic Product (GDP) is a measure of economic growth, and represents the value of goods and services produced in the province.

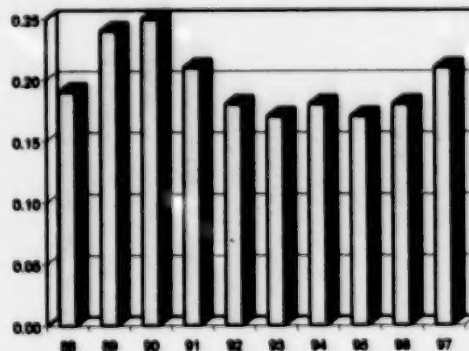
Personal Income (PI) is the aggregate of income from all sources to individuals.

Values for GDP (at market prices) and PI were obtained from Statistics Canada. GDP and PI values since 1992 reflect the revisions of the Canadian National Economic and Financial Accounts.

**Fire Losses as a  
Percentage of Gross Domestic Product**

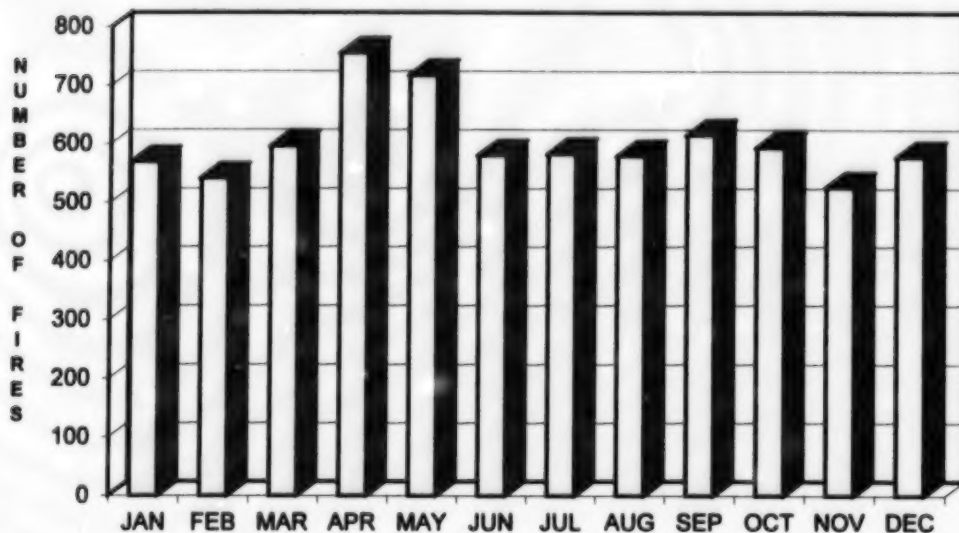


**Fire Losses as a Percentage of Personal  
Income**

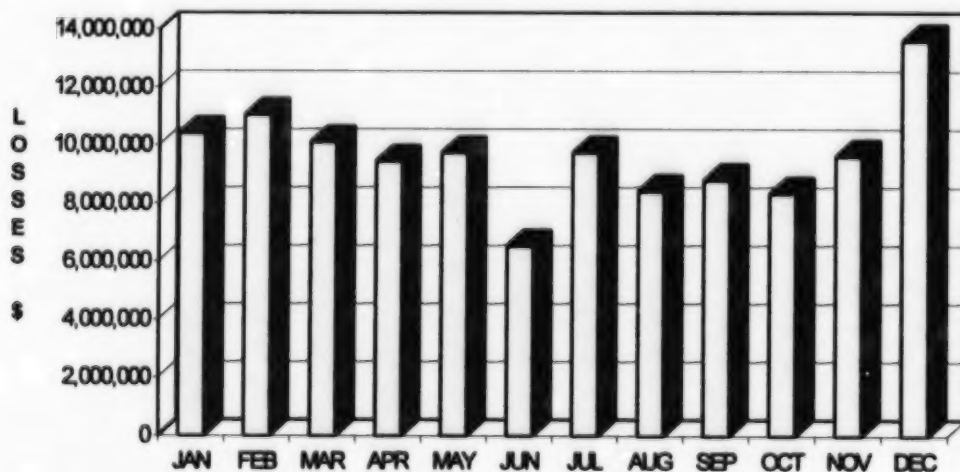


**Commentary:** Between 1988 and 1997, fire losses have averaged 0.15% of Gross Domestic Product and 0.2% of Personal Income.

## AVERAGE NUMBER OF FIRES BY MONTH 1988 - 1997

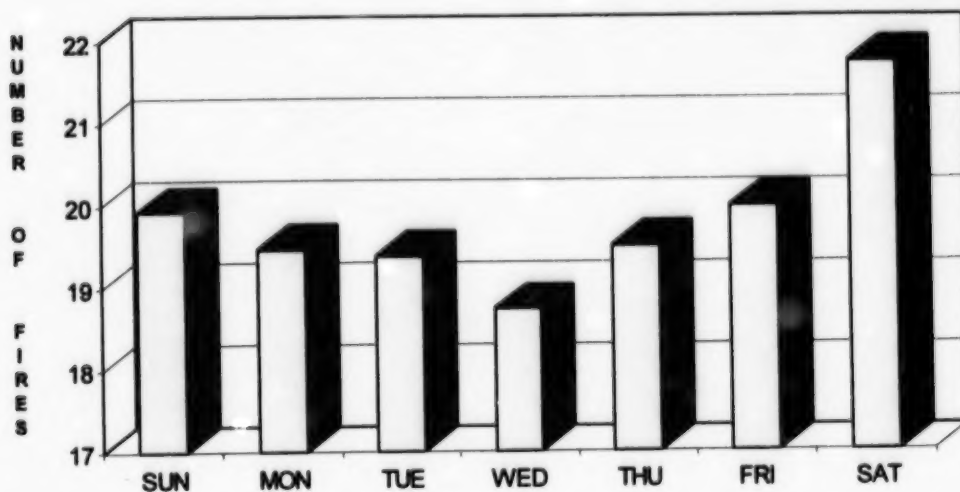


## AVERAGE FIRE LOSS BY MONTH 1988 - 1997

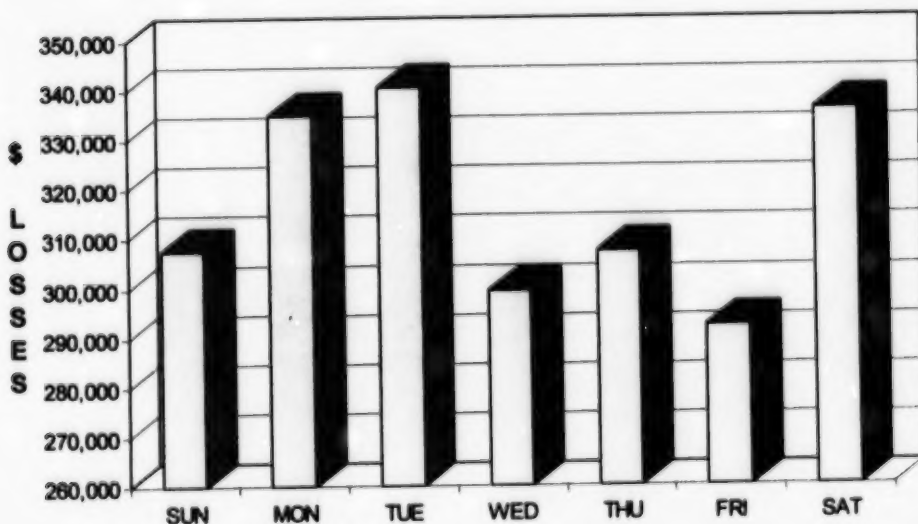


Commentary: The highest number of fires was in April (755) followed by May (717). The highest fire losses per month were in December (\$13,595,856), February (\$11,046,169) and January (\$10,405,384).

## AVERAGE NUMBER OF FIRES BY DAY OF WEEK 1988 - 1997

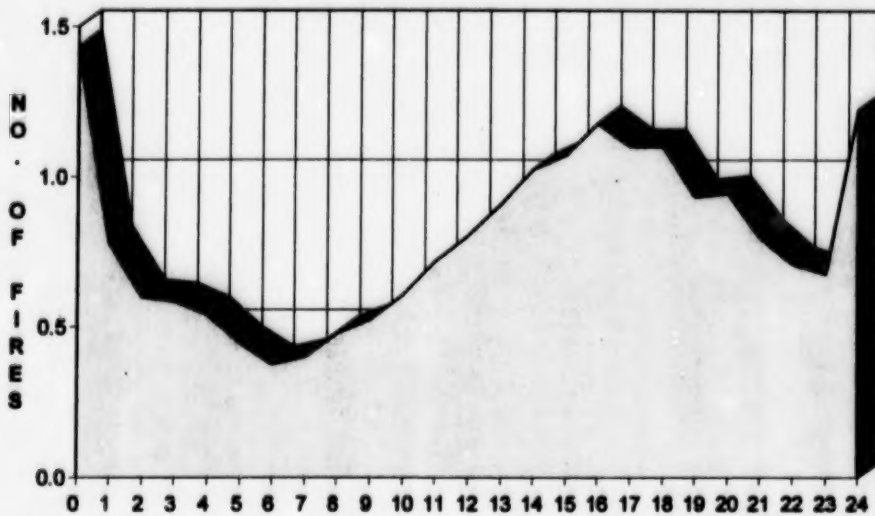


## AVERAGE FIRE LOSS BY DAY OF WEEK 1988 - 1997

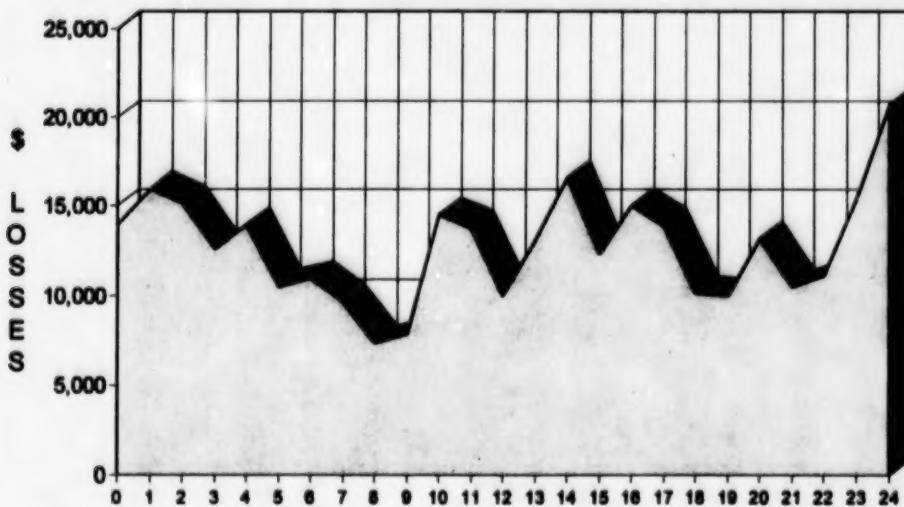


Commentary: The highest number of fires occurred on Saturday (22), while the highest dollar losses were on Tuesday (\$340,480).

## AVERAGE NUMBER OF FIRES BY HOUR OF DAY 1988 - 1997



## AVERAGE FIRE LOSS BY HOUR OF DAY 1988 - 1997



Commentary: Where time of fire was known, the number of fires peaked at 12 midnight, while the majority of fires occurred between the hours of 4 p.m. - 6 p.m. The average dollar loss was highest at 12 midnight (\$20,711). 0 value for hour of day represents unknown time of fire.

## FIRES BY LOSS CATEGORY - 1997

LOSS CATEGORY	FIRES	% FIRES	\$ LOSSES	% \$ LOSSES
\$1 - 99	767	11.5	12,051	0.0
\$100 - 999	2023	30.3	650,303	0.5
\$1,000 - 9,999	2288	34.3	7,777,931	5.5
\$10,000 - 49,999	1022	15.3	22,660,135	16.0
\$50,000 - 249,999	476	7.1	49,116,069	34.7
\$250,000 - 499,999	67	1.0	21,499,298	15.2
\$500,000 AND OVER	28	0.4	39,780,242	28.1
TOTAL	6671	100.0	141,496,029	100.0

## 1997 LARGE LOSS FIRES (\$500,000 AND OVER)

LOCATION	PROPERTY CLASS	ACT OR OMISSION	\$ LOSSES
ATHABASCA CTY #12	WOOD/LUMBER MFG.	INSTALLATION DEFICIENCY	1,344,000
BARRHEAD CTY #11	ANIMAL BARN (CATTLE/PIGS/HORSES ETC.)	WELDING OR CUTTING TOO CLOSE TO	1,900,000
BONNYVILLE	FURN./APPL./HARDWARE SALES-UNCLASS.	UNKNOWN	778,584
CALGARY CITY	BUILDING UNDER CONSTRUCTION	UNKNOWN	4,800,000
CALGARY CITY	WAREHOUSE (GENERAL)	IMPROPER STORAGE	6,000,000
CALGARY CITY	PLASTIC PRODUCTS MFG.	UNKNOWN	1,050,000
CALGARY CITY	BUILDING UNDER CONSTRUCTION	ARSON FOR VENGEFUL/SPITEFUL PURPOSES	1,000,000
CALGARY CITY	APARTMENTS	ARSON FOR VENGEFUL/SPITEFUL PURPOSES	682,584
CALGARY CITY	APARTMENTS	ARSON FOR VENGEFUL/SPITEFUL PURPOSES	907,795
EDMONTON CITY	HARDWARE STORE	ELECTRICAL SHORT CIRCUIT	2,050,000
EDMONTON CITY	RESTAURANT/CAFE/DINER	OVERHEATED COOKING OIL, GREASE, WAX	658,452
FORESTBURG	ELEVATORS/GRAIN (COMMERCIAL)	MECH., ELECT. FAILURE-UNKNOWN	750,000
GRANDE PRAIRIE CITY	LUMBER, RETAIL SALES	SUSPECTED ARSON	1,720,038
HINTON	FOOD/BEVERAGE SALE-UNCLASS.	SUSPECTED ARSON	550,000
IRMA	ELEVATORS/GRAIN (COMMERCIAL)	MISCELLANEOUS-UNCLASSIFIED	500,000
KNEEHILL M.D. #48	ANIMAL BARN (CATTLE/PIGS/HORSES ETC.)	ELECTRICAL SHORT CIRCUIT	532,491
LEDUC CTY #25	METAL PRODUCTS MFG.	VANDALISM, MISCHIEF, CHARGES LAID	620,381
RED DEER CITY	APARTMENTS	SMOKER'S MATERIAL	947,300
ROCKY VIEW M.D. #44	ONE AND TWO FAMILY DWELLINGS	UNKNOWN	634,840
ROCKY VIEW M.D. #44	ONE AND TWO FAMILY DWELLINGS	ELECTRICAL SHORT CIRCUIT	632,155
ROCKY VIEW M.D. #44	ONE AND TWO FAMILY DWELLINGS	MECH., ELECT. FAILURE-UNKNOWN	843,200
ROCKY VIEW M.D. #44	ONE AND TWO FAMILY DWELLINGS	UNKNOWN	600,000
S.A. #4	PETROLEUM REFINERIES	PART FAILURE, LEAK, BREAK	2,000,000
SLAVE LAKE	GENERAL MAINTENANCE SHOP	SMOKER'S MATERIAL	637,179
STRATHCONA COUNTY	PETROLEUM REFINERIES	PART FAILURE, LEAK, BREAK	3,000,000
WILLOW CREEK M.D. #26	OUTDOOR PROPERTY-UNCLASS.	INADEQUATE CONTROL OF 'OPEN' FIRE	914,825
WILLOW CREEK M.D. #26	TRASH/RUBBISH (INCL. CONTAINERS)	INADEQUATE CONTROL OF 'OPEN' FIRE	1,418,440
WOOD BUFFALO SPECIALIZED MUNICIPALITY	PETROLEUM REFINERIES	UNKNOWN	2,500,000



# **FIRE LOSSES BY MAJOR PROPERTY CLASSIFICATIONS - 1997**

PROPERTY CLASSIFICATION		NO. OF FIRES	% OF TOTAL	\$ LOSSES	% OF TOTAL
ASSEMBLY	THEATRE, STUDIO, AUDITORIUM	2	0.0	1,200	0.0
	AMUSEMENT, RECREATION PLACE	26	0.4	387,600	0.3
	SCHOOL, COLLEGE, UNIVERSITY	54	0.8	804,854	0.4
	CHURCH, FUNERAL PARLOUR	10	0.1	391,504	0.3
	CLUBS, SOCIAL, SPORT	9	0.1	279,937	0.2
	MUSEUM, ART GALLERY, LIBRARY	1	0.0	500	0.0
	FOOD OR BEVERAGE ESTABLISHMENT	55	0.8	1,770,484	1.3
	PASSENGER TERMINAL, STATION	3	0.0	2,201	0.0
	SUB TOTAL	160	2.4	3,418,280	2.4
INSTITUTIONAL	PRISON, JAIL, REFORMATORY	3	0.0	2,400	0.0
	HOME FOR THE AGED	9	0.1	5,613	0.0
	CHILD CARE	3	0.0	14,505	0.0
	HOSPITAL, SANATORIUM, CLINIC	13	0.2	204,523	0.1
	MISCELLANEOUS	4	0.1	820,100	0.4
	SUB TOTAL	32	0.5	847,141	0.6
RESIDENTIAL	MISCELLANEOUS	9	0.1	13,550	0.0
	ONE AND TWO FAMILY DWELLINGS	1127	16.9	40,888,320	28.8
	APARTMENT, TENEMENT	414	6.2	7,873,000	5.6
	ROOMING, BOARDING HOUSE	10	0.1	106,504	0.1
	HOTEL	25	0.4	647,161	0.5
	MOTOR HOTEL	12	0.2	95,491	0.1
	DORMITORY	13	0.2	949,824	0.7
	MOBILE HOME, TRAILER	194	2.9	4,183,160	3.0
	SUB TOTAL	1804	27.0	54,557,010	38.6
BUSINESS AND PERSONAL SERVICE	MISCELLANEOUS	2	0.0	3,100	0.0
	OFFICE	31	0.5	489,217	0.3
	PERSONAL SERVICE	8	0.1	100,295	0.1
	ELECTRONIC EQUIPMENT	1	0.0	500	0.0
	SUB TOTAL	42	0.6	573,112	0.4
MERCANTILE	MISCELLANEOUS	11	0.2	546,761	0.4
	FOOD, BEVERAGE SALE	26	0.4	1,844,290	1.3

(CONTINUED)

# **FIRE LOSSES BY MAJOR PROPERTY CLASSIFICATIONS - 1997**

PROPERTY CLASSIFICATION		NO. OF FIRES	% OF TOTAL	\$ LOSSES	% OF TOTAL
MERCANTILE	TEXTILE, WEARING APPAREL SALE	3	0.0	202,700	0.1
	FURNITURE, APPLIANCE, HARDWARE SALES	8	0.1	3,486,825	2.5
	BOOKS, NEWSPAPERS, DRUGS, SPECIALTIES	6	0.1	164,164	0.1
	RECREATION, HOBBY SUPPLIES	9	0.1	1,965,935	1.4
	REPAIR SHOP, LAUNDRY, DRY CLEANER	17	0.3	1,704,157	1.2
	MOTOR VEHICLES, BOATS, SALES & SERVICE	30	0.4	1,464,792	1.0
	DEPARTMENT, VARIETY STORE	19	0.3	393,276	0.3
	SUB TOTAL	131	2.0	11,772,920	8.3
INDUSTRIAL MANUFACTURING PROPERTIES	MISCELLANEOUS	15	0.2	139,243	0.1
	CHEMICALS, PETROLEUM, PAINTS, PLASTICS	30	0.4	9,901,639	7.0
	WOOD, FURNITURE, PAPER, PRINTING	37	0.6	2,443,645	1.7
	METAL/(PRODUCTS), ELECT. EQUIPMENT & APPLIANCES	30	0.4	1,169,896	0.8
	FOOD PROCESSING	14	0.2	851,087	0.6
	BEVERAGE, TOBACCO, SOAP, MARGARINE	3	0.0	6,100	0.0
	WEARING APPAREL, FOOTWEAR	3	0.0	600	0.0
	VEHICLES AND RELATED EQUIPMENT	1	0.0	100	0.0
	SUB TOTAL	133	2.0	14,514,310	10.3
STORAGE PROPERTIES	MISCELLANEOUS	30	0.4	7,079,645	5.0
	AGRICULTURAL PRODUCTS	19	0.3	2,318,279	1.6
	TEXTILES, FIBRES, CLOTHING	1	0.0	50	0.0
	PROCESSED FOOD, BEVERAGE	2	0.0	4,500	0.0
	FLAMMABLE LIQUID, GASES, PETRO. PRODUCTS	9	0.1	268,218	0.2
	WOOD, FURNITURE, PAPER AND PRODUCTS	64	1.0	282,911	0.2
	CHEMICALS, PLASTICS, PAINTS	1	0.0	120,001	0.1
	METAL PRODUCTS, MACHINERY, ELECTRICAL APPLIANCE	10	0.1	519,507	0.4

(CONTINUED)

## FIRE LOSSES BY MAJOR PROPERTY CLASSIFICATIONS - 1997

PROPERTY CLASSIFICATION		NO. OF FIRES	% OF TOTAL	\$ LOSSES	% OF TOTAL
STORAGE PROPERTIES	VEHICLE	273	4.1	4,591,012	3.2
	SUB TOTAL	409	6.1	15,184,123	10.7
SPECIAL PROPERTY-TRANSPORTATION EQUIPMENT	OUTDOOR PROPERTY	1170	17.5	3,789,590	2.7
	SPECIAL CONNECTING THOROUGHFARES	5	0.1	13,601	0.0
	UNDER CONSTRUCTION/DEMOLITION: VACANT	101	1.5	7,758,328	5.5
	WATERCRAFT	9	0.1	30,899	0.0
	RAIL TRANSPORT VEHICLE AND EQUIPMENT	7	0.1	64,200	0.0
	GROUND TRANSPORT VEHICLE	1725	25.9	10,472,561	7.4
	AIRCRAFT	1	0.0	10	0.0
	SPECIAL VEHICLES	313	4.7	9,029,122	6.4
	SUB TOTAL	3331	49.9	31,138,311	22.0
MISCELLANEOUS PROPERTY	MISCELLANEOUS	14	0.2	43,671	0.0
	LABORATORIES	1	0.0	30,000	0.0
	FARM FACILITIES	299	4.5	7,885,427	5.6
	MISCELLANEOUS OUTBUILDINGS	209	3.1	676,560	0.5
	UTILITY	85	1.3	650,897	0.5
	CEMENT, GLASS, POTTERY MANUFACTURING	2	0.0	10,250	0.0
	MINING, QUARRYING	9	0.1	150,378	0.1
	COMMUNICATIONS	10	0.1	43,639	0.0
SUB TOTAL		629	9.4	9,490,822	6.7
TOTAL		6671	100.0	141,486,029	100.0

Commentary: The largest number of fires occurred in ground transport vehicles (1,725, or 26%), outdoor properties (1,170, or 18%) and one and two family dwellings (1,127, or 17%). The two highest dollar losses per fire were in mercantile properties: furniture, appliance, hardware sales (\$453,853); and recreation, hobby supplies (\$218,437).

# PROPERTY LOSSES RELATED TO AREA OF ORIGIN - 1997

PROPERTY CLASSIFICATION	MEANS OF EGRESS		ASSEMBLY AREA		FUNCTION AREA		STORAGE AREA	
	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES
ASSEMBLY	19	381,002	10	18,277	63	556,946	5	126,401
INSTITUTIONAL	1	1,200	2	2,650	22	40,801	-	-
RESIDENTIAL	87	1,592,380	192	6,062,680	840	15,934,514	68	6,016,544
BUSINESS AND PERSONAL SERVICE	5	9,111	2	21,313	10	33,592	5	9,252
MERCANTILE	7	574,910	3	291,121	24	2,803,789	20	3,622,389
INDUSTRIAL MANUFACTURING PROPERTIES	3	18,000	-	-	29	3,860,905	16	1,159,482
STORAGE PROPERTIES	5	502,552	-	-	3	1,100,275	148	9,720,885
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	5	13,900	6	576,451	14	304,806	16	59,813
MISCELLANEOUS PROPERTY	-	-	-	-	14	146,512	94	5,117,020
TOTAL	132	3,092,055	215	6,972,492	1019	24,782,140	370	25,831,786

PROPERTY CLASSIFICATION	SERVICE FACILITIES		SERVICE & EQUIPMENT AREA		STRUCTURAL AREA		VEHICLE AREA	
	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES
ASSEMBLY	6	727,687	12	366,504	35	911,813	-	-
INSTITUTIONAL	1	185,000	2	2,990	4	614,500	-	-
RESIDENTIAL	36	861,094	85	2,678,559	322	12,274,563	24	328,582
BUSINESS AND PERSONAL SERVICE	1	501	3	68,400	14	431,872	-	-
MERCANTILE	3	88,847	25	1,675,074	27	1,132,854	6	577,449
INDUSTRIAL MANUFACTURING PROPERTIES	8	122,196	44	5,771,436	21	347,507	-	-
STORAGE PROPERTIES	1	210,000	6	155,600	116	1,546,427	36	1,196,535
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	1	5,000	4	62,000	32	1,356,303	2054	19,597,692
MISCELLANEOUS PROPERTY	1	250	11	442,293	230	1,439,888	12	349,144
TOTAL	58	2,200,575	192	11,222,856	801	20,055,727	2134	22,051,402

## PROPERTY LOSSES RELATED TO AREA OF ORIGIN - 1997

PROPERTY CLASSIFICATION	OUTSIDE AREA		UNKNOWN	
	NO. OF FIRES	LOSSES	NO. OF FIRES	LOSSES
ASSEMBLY	9	29,650	1	300,000
RESIDENTIAL	62	1,446,530	88	7,361,564
BUSINESS AND PERSONAL SERVICE	1	70	1	1
MERCANTILE	4	41,822	12	964,665
INDUSTRIAL MANUFACTURING PROPERTIES	2	49,600	10	3,185,184
STORAGE PROPERTIES	78	186,097	16	563,752
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	1186	8,439,591	13	722,755
MISCELLANEOUS PROPERTY	219	799,838	48	1,195,877
TOTAL	1561	10,993,198	189	14,293,798

Commentary: The two most frequent areas of fire origin in a total of 3,379 structural fires were function areas (30%) and structural areas (24%). The same conclusion applies to residential fires; function (47%) and structural (18%).

# PROPERTY LOSSES RELATED TO ACT OR OMISSION - 1997

PROPERTY CLASSIFICATION	INCENDIARY		MISUSE OF SOURCE OF IGNITION		MISUSE OF MATERIAL IGNITED		MECHANICAL ELECTRICAL FAILURE, MALFUNCTION	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	67	1,387,951	13	278,668	15	817,628	34	369,073
INSTITUTIONAL	8	616,805	8	192,001	1	20,000	6	18,080
RESIDENTIAL	187	5,215,462	383	10,184,221	325	5,697,074	319	11,169,763
BUSINESS AND PERSONAL SERVICE	12	46,824	11	204,761	1	39,172	9	195,863
MERCANTILE	38	3,922,253	16	1,053,514	8	366,220	39	3,176,272
INDUSTRIAL MANUFACTURING PROPERTIES	5	644,914	33	667,334	7	290,666	45	6,175,034
STORAGE PROPERTIES	131	937,045	74	1,385,999	28	6,548,260	67	2,583,207
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	884	4,270,761	433	3,862,156	57	241,206	1325	9,889,916
MISCELLANEOUS PROPERTY	118	252,542	184	3,429,687	22	528,049	109	2,649,416
TOTAL	1450	17,294,557	1155	21,259,341	464	14,548,275	1953	36,224,624

PROPERTY CLASSIFICATION	CONSTRUCTION, DESIGN, INSTALLATION DEF.		MISUSE OF EQUIPMENT		HUMAN FAILING		VEHICLE ACCIDENT	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	3	317,000	.	.	17	91,835	.	.
INSTITUTIONAL	1	490	.	.	7	1,764	.	.
RESIDENTIAL	54	2,234,239	4	7,101	318	4,774,677	.	.
BUSINESS AND PERSONAL SERVICE	.	.	.	.	6	26,992	.	.
MERCANTILE	3	42,602	.	.	10	605,800	.	.
INDUSTRIAL MANUFACTURING PROPERTIES	8	1,520,033	1	200	12	395,771	.	.
STORAGE PROPERTIES	7	38,841	4	1,000	15	184,976	1	500
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	28	232,187	10	66,082	75	1,192,296	61	1,839,547
MISCELLANEOUS PROPERTY	14	273,339	2	700	12	91,442	1	500
TOTAL	118	4,658,731	21	75,083	472	7,385,553	63	1,840,547



## PROPERTY LOSSES RELATED TO ACT OR OMISSION - 1997

PROPERTY CLASSIFICATION	MISCELLANEOUS		UNKNOWN	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	5	152,600	6	3,525
INSTITUTIONAL	.	.	1	1
RESIDENTIAL	24	272,200	190	15,002,273
BUSINESS AND PERSONAL SERVICE	.	.	3	59,500
MERCANTILE	1	2,000	16	2,604,259
INDUSTRIAL MANUFACTURING PROPERTIES	7	153,961	15	4,666,397
STORAGE PROPERTIES	7	994,466	75	2,508,829
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	57	248,583	401	9,295,577
MISCELLANEOUS PROPERTY	50	677,961	117	1,587,186
TOTAL	151	2,501,771	824	35,727,547

**Commentary:** The most frequent acts or omissions in the special property transportation equipment classification (outdoor property, buildings under construction/demolition and vehicles) were mechanical, electrical failure/malfunction (40%), incendiary (27%) and misuse of source of ignition (13%).

In the residential classification the most common acts or omissions were: misuse of source of ignition (21%), misuse of material ignited (10%), mechanical, electrical failure/malfunction (10%) and human failing (10%). The percentage of incendiary fires increased from 20% in 1996 to 22% in 1997. In 1997, one out of 4.5 reported fires was of incendiary origin.

Acts or omissions were unknown/undetermined in 12% of the fires in 1997.



# PROPERTY LOSSES RELATED TO SOURCE OF IGNITION - 1997

PROPERTY CLASSIFICATION	COOKING EQUIPMENT		HEATING EQUIPMENT		APPLIANCES & EQUIPMENT		ELECTRICAL DISTRIBUTION EQUIPMENT	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	21	691,866	11	361,101	4	1,500	12	328,384
INSTITUTIONAL	5	20,264	.	.	3	7,600	2	6,030
RESIDENTIAL	418	5,458,078	161	6,349,656	142	2,729,643	100	5,673,757
BUSINESS AND PERSONAL SERVICE	.	.	2	152,000	4	6,810	3	10,000
MERCANTILE	6	106,248	15	456,722	13	375,785	9	2,217,575
INDUSTRIAL MANUFACTURING PROPERTIES	7	89,552	8	379,485	12	869,561	8	142,062
STORAGE PROPERTIES	8	56,511	27	889,511	4	98,377	42	1,209,084
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	38	7,821	22	208,406	7	62,845	786	5,555,412
MISCELLANEOUS PROPERTY	5	76,982	20	440,614	6	66,050	55	1,239,672
TOTAL	508	6,507,322	286	9,237,495	195	4,216,171	1017	16,381,956

PROPERTY CLASSIFICATION	OTHER ELECTRICAL EQUIPMENT		SMOKER'S MATERIAL & 'OPEN' FLAMES		EXPOSURE		MISCELLANEOUS	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	13	88,157	61	1,105,613	8	74,400	10	185,773
INSTITUTIONAL	.	.	15	209,156	3	601,000	2	2,990
RESIDENTIAL	57	1,348,412	524	11,153,462	145	5,354,741	23	544,285
BUSINESS AND PERSONAL SERVICE	2	650	19	80,417	7	239,672	2	24,063
MERCANTILE	7	250,509	40	2,701,184	18	443,839	6	295,781
INDUSTRIAL MANUFACTURING PROPERTIES	9	1,384,700	35	1,094,366	6	83,990	31	6,236,047
STORAGE PROPERTIES	11	151,735	108	1,413,944	106	796,570	12	6,228,315
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	17	621,098	832	3,437,008	429	4,550,076	443	4,398,312
MISCELLANEOUS PROPERTY	25	1,166,405	102	3,153,021	263	1,009,824	44	859,328
TOTAL	141	5,011,666	1736	24,348,171	985	13,154,112	573	18,774,894

## PROPERTY LOSSES RELATED TO SOURCE OF IGNITION - 1997

PROPERTY CLASSIFICATION	NO IGNITING OBJECT		UNKNOWN	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	1	1,000	19	580,506
INSTITUTIONAL	.	.	2	101
RESIDENTIAL	8	183,004	206	15,761,972
BUSINESS AND PERSONAL SERVICE	.	.	3	59,500
MERCANTILE	.	.	17	4,925,277
INDUSTRIAL MANUFACTURING PROPERTIES	1	50,000	16	4,184,547
STORAGE PROPERTIES	1	500,000	90	3,840,076
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	3	36,800	754	12,258,533
MISCELLANEOUS PROPERTY	8	19,479	101	1,459,447
TOTAL	22	792,283	1208	43,069,959

Commentary: Smoker's material and 'open' flames (26%), electrical distribution equipment (15%), exposure fires (15%) and cooking equipment (8%) were the most common sources of ignition.

In residential properties, smoker's material and 'open' flames (29%), cooking equipment (23%), and heating equipment (10%) were the most common sources of ignition.

Sources of ignition were unknown in 18% of the fires in 1997, and these fires caused an average dollar loss of \$35,654 per fire.

# PROPERTY LOSSES RELATED TO FUEL OR ENERGY - 1997

PROPERTY CLASSIFICATION	COAL OR WOOD, ETC.		FUEL OIL		GASOLINE		NATURAL GAS OR OTHER FUEL GAS	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	2	1,736	.	.	1	1,000	29	1,131,731
BUSINESS AND PERSONAL SERVICE	.	.	1	150,000	.	.	4	16,000
INDUSTRIAL MANUFACTURING PROPERTIES	7	258,801	3	51,500	.	.	35	6,456,286
INSTITUTIONAL	.	.	1	490	.	.	1	100
MERCANTILE	1	26,470	1	45,089	.	.	22	526,373
MISCELLANEOUS PROPERTY	10	122,833	.	.	12	44,687	15	2,583,996
RESIDENTIAL	83	3,021,704	8	107,327	10	216,642	166	3,500,076
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	11	3,104	31	832,673	263	1,204,545	88	621,000
STORAGE PROPERTIES	7	63,007	2	19,300	4	59,296	24	374,628
TOTAL	121	3,497,655	47	1,206,379	290	1,526,170	384	15,110,808

PROPERTY CLASSIFICATION	ELECTRICITY		EXPOSURE FIRE		LIGHTNING		SMOKERS MATERIAL	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	34	595,522	8	74,400	1	1,000	55	846,412
BUSINESS AND PERSONAL SERVICE	10	38,323	7	239,672	.	.	15	48,085
INDUSTRIAL MANUFACTURING PROPERTIES	32	2,353,337	6	83,990	.	.	11	256,252
INSTITUTIONAL	9	33,794	3	601,000	.	.	13	23,156
MERCANTILE	32	2,976,109	18	443,839	.	.	28	2,309,834
MISCELLANEOUS PROPERTY	95	3,033,988	263	1,009,824	8	19,479	59	441,959
RESIDENTIAL	653	14,686,661	145	5,354,741	8	183,004	386	9,149,337
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	817	6,272,657	429	4,550,076	2	11,300	749	3,115,325
STORAGE PROPERTIES	68	1,651,395	106	796,570	1	500,000	87	1,131,837
TOTAL	1750	31,641,786	985	13,154,112	20	714,783	1403	17,322,197

## PROPERTY LOSSES RELATED TO FUEL OR ENERGY - 1997

PROPERTY CLASSIFICATION	UNCLASSIFIED		UNKNOWN	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	11	185,973	19	580,506
BUSINESS AND PERSONAL SERVICE	2	21,532	3	59,500
INDUSTRIAL MANUFACTURING PROPERTIES	17	543,297	22	4,510,847
INSTITUTIONAL	3	188,500	2	101
MERCANTILE	6	295,781	23	5,149,425
MISCELLANEOUS PROPERTY	58	713,550	109	1,520,506
RESIDENTIAL	122	2,093,774	223	16,243,744
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	164	1,871,498	777	12,755,515
STORAGE PROPERTIES	17	6,639,311	93	3,946,779
TOTAL	400	12,553,216	1271	44,766,923

Commentary: Where known, the most common fuel or energy associated with the source of ignition were electricity (26%), smoker's material (21%), exposure fire (15%), and natural gas or other fuel gas (6%).

# PROPERTY LOSSES RELATED TO MATERIAL FIRST IGNITED - 1997

PROPERTY CLASSIFICATION	CLOTHING, TEXTILES		FURNITURE, FURNISHINGS		STRUCTURAL COMPONENTS		WOOD, PAPER PRODUCTS	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	11	314,248	1	50,000	32	921,454	28	132,419
BUSINESS AND PERSONAL SERVICE	3	11,010	.	.	8	199,500	12	22,857
INDUSTRIAL MANUFACTURING PROPERTIES	2	5,000	1	175,000	24	339,100	33	1,184,209
INSTITUTIONAL	6	8,755	4	4,850	4	785,490	5	1,433
MERCANTILE	7	58,185	1	200	20	391,622	15	837,247
MISCELLANEOUS PROPERTY	2	84,025	1	37,000	140	1,479,298	58	939,815
RESIDENTIAL	139	2,724,582	227	6,032,775	320	12,725,971	163	3,196,884
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	25	85,755	46	193,147	52	622,395	257	1,588,559
STORAGE PROPERTIES	5	15,778	8	129,444	99	7,524,174	67	524,972
TOTAL	200	3,307,338	289	6,622,416	699	24,989,004	638	8,428,395

PROPERTY CLASSIFICATION	AGRICULTURAL PRODUCTS		CHEMICALS		FLAMMABLE & COMBUSTIBLE LIQUIDS		FLAMMABLE GASES	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	6	81,936	13	53,609	22	1,480,476	5	80,130
BUSINESS AND PERSONAL SERVICE	2	810	2	21,313	2	8,500	.	.
INDUSTRIAL MANUFACTURING PROPERTIES	7	1,358,810	6	346,536	22	5,434,066	8	2,554,551
INSTITUTIONAL	1	50	1	1,000	3	33,701	.	.
MERCANTILE	3	21,100	6	287,010	22	3,812,938	4	210,350
MISCELLANEOUS PROPERTY	135	1,472,026	8	2,100,019	24	682,367	5	76,022
RESIDENTIAL	64	1,117,098	70	630,545	302	5,551,887	45	826,021
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	324	4,887,381	135	742,897	602	5,466,578	70	605,816
STORAGE PROPERTIES	11	1,668,128	10	141,082	58	950,305	8	78,764
TOTAL	553	10,607,339	251	4,324,011	1057	23,420,818	145	4,431,654

## PROPERTY LOSSES RELATED TO MATERIAL FIRST IGNITED - 1997

PROPERTY CLASSIFICATION	MISCELLANEOUS		UNKNOWN	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	30	210,358	12	93,650
BUSINESS AND PERSONAL SERVICE	9	54,222	4	254,900
INDUSTRIAL MANUFACTURING PROPERTIES	12	229,270	18	2,887,768
INSTITUTIONAL	8	11,862	.	.
MERCANTILE	30	3,625,369	23	2,528,899
MISCELLANEOUS PROPERTY	49	400,628	207	2,219,622
RESIDENTIAL	202	3,700,517	272	18,050,730
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	901	2,189,791	919	14,755,992
STORAGE PROPERTIES	45	699,737	98	3,451,739
TOTAL	1286	11,121,754	1553	44,243,300

Commentary: The materials most commonly ignited were flammable and combustible liquids (16%), wood, paper products (10%), structural components (10%) and agricultural products (8%).

Materials first ignited were unknown in 23% of fires in 1997.

# PROPERTY LOSSES RELATED TO INITIAL DETECTION - 1997

PROPERTY CLASSIFICATION	AUTOMATIC SYSTEMS		HEAT ALARM/DETECTOR DEVICE		SMOKE ALARM/DETECTOR DEVICE		VISUAL SIGHTING/PERSONAL DETECTION	
	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES	NO. OF FIRES	\$ LOSSES
ASSEMBLY	5	16,700	7	35,298	12	77,419	135	3,288,813
BUSINESS AND PERSONAL SERVICE	.	.	.	.	2	201	40	572,911
INDUSTRIAL MANUFACTURING PROPERTIES	6	12,500	2	2,000,500	4	352,100	119	11,899,210
INSTITUTIONAL	.	.	.	.	15	11,814	16	815,327
MERCANTILE	1	1,000	2	21,700	1	2,000	121	11,212,957
MISCELLANEOUS PROPERTY	.	.	.	.	.	.	614	9,299,951
RESIDENTIAL	2	30,050	2	5,495	220	7,784,500	1509	43,981,560
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	.	.	.	.	.	.	3322	30,899,310
STORAGE PROPERTIES	2	7,700	1	9,300	.	.	401	15,055,991
TOTAL	16	67,950	14	2,072,293	254	8,228,034	6277	127,026,030

PROPERTY CLASSIFICATION	UNCLASSIFIED OR UNKNOWN	
	NO. OF FIRES	\$ LOSSES
ASSEMBLY	1	50
INDUSTRIAL MANUFACTURING PROPERTIES	2	250,000
INSTITUTIONAL	1	20,000
MERCANTILE	6	535,263
MISCELLANEOUS PROPERTY	15	190,871
RESIDENTIAL	71	2,755,405
SPECIAL PROPERTY TRANSPORTATION EQUIPMENT	9	239,001
STORAGE PROPERTIES	5	111,132
TOTAL	110	4,101,722

Commentary: Visual detection represented 94% of all means of initial detection of fires, while smoke alarm/detector devices accounted for 4%.



# FIRES BY METHOD OF FIRE CONTROL AND EXTINGUISHMENT - 1997

METHOD OF FIRE CONTROL AND EXTINGUISHMENT		NO. OF FIRES	% OF TOTAL	\$ LOSSES	% OF TOTAL
HAND FIRE EXTINGUISHER	WATER PUMP TANK	108	1.6	738,662	0.5
	WATER PRESSURIZED	47	0.7	339,990	0.2
	FOAM	15	0.2	145,610	0.1
	VAPOURIZING LIQUID/HALON	1	0.0	350	0.0
	CO2	23	0.3	363,588	0.3
	DRY CHEMICAL	396	5.9	1,246,039	0.9
	MULTIPURPOSE DRY CHEMICAL	45	0.7	198,210	0.1
	HAND FIRE EXTINGUISHER-UNCLASSIFIED	16	0.2	24,501	0.0
	SUB TOTAL	651	9.8	3,056,950	2.2
STANDPIPE SYSTEM	SM. HOSE/38 MM STRAIGHT STREAM NOZ.	19	0.3	284,783	0.2
	SM. HOSE/38 MM COMBINATION NOZ.	129	1.9	1,076,746	0.8
	LGE. HOSE/65 MM STRAIGHT STREAM NOZ.	2	0.0	32,935	0.0
	LGE. HOSE/65 MM COMBINATION NOZ.	3	0.0	297,798	0.2
	CONT. FLOW/<38 MM COMBINATION NOZ.	3	0.0	35,150	0.0
	STANDPIPE SYSTEM-UNCLASSIFIED	2	0.0	122,902	0.1
	SUB TOTAL	158	2.4	1,850,314	1.3
"MAKESHIFT" FIREFIGHTING AID	GARDEN HOSE	164	2.5	222,948	0.2
	WATER BUCKET	100	1.5	207,749	0.1
	SMALL WATER CONTAINER	137	2.1	229,118	0.2
	SAND BUCKET	3	0.0	770	0.0
	DRY CHEMICAL AND SCOOP	4	0.1	14,800	0.0
	BAKING SODA	20	0.3	40,658	0.0
	SMOTHERED BY COVERING	69	1.0	155,516	0.1
	SNOW	34	0.5	115,234	0.1

(CONTINUED)

# FIRES BY METHOD OF FIRE CONTROL AND EXTINGUISHMENT - 1997

METHOD OF FIRE CONTROL AND EXTINGUISHMENT		NO. OF FIRES	% OF TOTAL	\$ LOSSES	% OF TOTAL
*MAKESHIFT* FIREFIGHTING AID	MAKESHIFT FIRE FIGHTING AID-UNCLASSIFIED	65	1.0	82,495	0.1
	SUB TOTAL	596	8.9	1,069,088	0.8
FIRE DEPARTMENT-WATER	BOOSTER HOSE, 25 MM OR LESS	156	2.3	256,373	0.2
	38 MM HOSE, 1 HOSELINE	1796	26.9	10,283,379	7.3
	38 MM HOSE, 2 OR MORE	827	12.4	28,680,379	20.3
	65 MM HOSE, 1 HOSELINE	29	0.4	313,389	0.2
	65 MM HOSE, 2 OR MORE	35	0.5	2,162,448	1.5
	77 MM OR LARGER HOSE, 1 OR MORE	9	0.1	278,754	0.2
	COMB. OF 38 MM, 65 MM, 77 MM OR LARGER	376	5.6	45,734,588	32.3
	PORTABLE WATER DELUGE SET	12	0.2	4,559,435	3.2
	FIRE DEPARTMENT - WATER- UNCLASSIFIED	136	2.0	1,665,513	1.2
	SUB TOTAL	3376	50.6	93,934,258	66.4
FIRE DEPARTMENT - OTHER THAN WATER	CRASH-FIRE FOAM VEH., USING MONITOR	4	0.1	267,201	0.2
	PUMPER, FOAM HAND. ONLY, VIA EDUCTOR	92	1.4	2,427,897	1.7
	VEHICLE, COMBINATION, FOAM-DRY CHEMICAL	2	0.0	291,396	0.2
	VEHICLE, DRY CHEMICAL, UNDER 450 KG	4	0.1	25,750	0.0
	FIRE DEPT. - OTHER THAN WATER-UNCLASSIFIED	19	0.3	62,510	0.0
	SUB TOTAL	121	1.8	3,074,754	2.2
SPRINKLER SYSTEM	WET PIPE SYS., ALARM CONN. TO FIRE DEPT.	6	0.1	4,200	0.0
	WET PIPE SYS., LOCAL ALARM ONLY	3	0.0	61,106	0.0
	DRY PIPE SYS., ALARM CONN. TO FIRE DEPT.	2	0.0	357,500	0.3
	DRY PIPE SYS., LOCAL ALARM ONLY	1	0.0	5,000	0.0
	SUB TOTAL	12	0.2	427,806	0.3
FIXED SYSTEM- OTHER THAN SPRINKLERS	DRY CHEMICAL SYSTEM	6	0.1	12,383	0.0

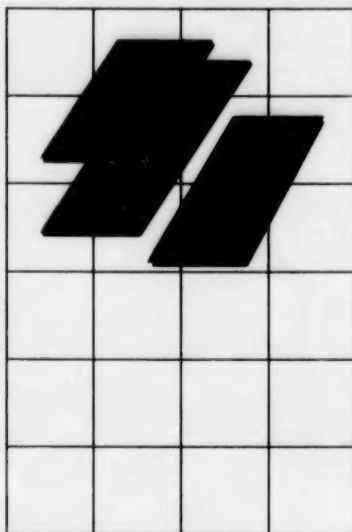
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## FIRES BY METHOD OF FIRE CONTROL AND EXTINGUISHMENT - 1997

METHOD OF FIRE CONTROL AND EXTINGUISHMENT		NO. OF FIRES	% OF TOTAL	\$ LOSSES	% OF TOTAL
FIXED SYSTEM- OTHER THAN SPRINKLERS	HALON SYSTEM	1	0.0	30,000	0.0
	WATER SPRAY SYSTEM	2	0.0	3,000	0.0
	SUB TOTAL	9	0.1	45,383	0.0
BURNED OUT	BURNED OUT BEFORE FIRE DEPT. ARRIVAL	220	3.3	2,013,357	1.4
	INCAPABLE OF CONTROLLING	13	0.2	2,339,769	1.7
	BURNED OUT-UNCLASSIFIED	79	1.2	583,949	0.4
	SUB TOTAL	312	4.7	4,917,075	3.5
MISCELLANEOUS	DRY CHEMICAL HANDHOSE SYS., >= 25 KG	1	0.0	500	0.0
	MISCELLANEOUS-UNCLASSIFIED	181	2.7	6,873,029	4.9
	MISCELLANEOUS-UNKNOWN	161	2.4	2,327,125	1.6
	SUB TOTAL	343	5.1	9,200,654	6.5
UNKNOWN	UNKNOWN	1093	16.4	23,919,747	16.9
	SUB TOTAL	1093	16.4	23,919,747	16.9
TOTAL		6671	100.0	141,496,029	100.0

Commentary: The fire departments extinguished 51% of the reported fires, while hand fire extinguishers and "make shift" fire fighting aids were used to extinguish 10% and 9% of fires, respectively.

## **SECTION 3**



# **Alberta Home Fire Losses**

**Fire Commissioner's  
Statistical Report**

**1 9 9 7**



## HOME FIRES BY TYPE OF HOME - 1997

TYPE OF HOME	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
ONE/TWO FAMILY DWELLINGS	1127	68	6	30	157	56	40,688,320	78
APARTMENTS, TENEMENTS, FLATS	414	25	2	10	110	39	7,873,000	15
MOBILE HOMES	111	7	12	60	12	4	3,564,994	7
TOTAL	1652	100	20	100	279	100	52,126,314	100

Commentary: Twenty-five percent of all fires occurred in homes. Home fires accounted for 83% (20 out of 24) of fire deaths, 63% of all fire injuries and 37% of all dollar losses. Mobile home fires resulted in the most number of home fire deaths in 1997.

## HOME FIRES BY MAJOR AREAS OF FIRE ORIGIN - 1997

AREA OF ORIGIN	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
KITCHEN/COOKING AREA	432	26	5	25	76	27	5,491,506	11
SLEEPING (UNDER 5 OCCUPANTS)	191	12	2	10	61	22	5,786,596	11
LIVING/REC./FAMILY ROOM, LOUNGE, DEN	187	11	4	20	34	12	6,031,380	12
STRUCTURAL AREAS	143	9	6	30	24	9	8,412,703	16
LAUNDRY AREA	96	6	0	0	12	4	1,606,505	3
EXTERIOR WALL	86	5	1	5	4	1	1,533,039	3
HEATING EQUIPMENT ROOM	80	5	0	0	14	5	2,606,409	5
COURT/PATIO/TERRACE	56	3	0	0	4	1	1,303,296	3
UNKNOWN	76	5	2	10	8	3	7,046,384	14
STRUCTURAL AREA-UNCLASSIFIED	59	4	0	0	1	0	1,828,335	4
OTHER	246	15	0	0	41	15	10,480,161	20
TOTAL	1652	100	20	100	279	100	52,126,314	100

Commentary: The area of origin where most fires started was in the kitchen/cooking area (26). Deaths occurred more frequently when fire originated in the structural areas (30%) and living room/rec./family room areas (20%), while the injuries occurred more often in kitchen fires (27%) followed by bedroom fires (22%).

# HOME FIRES BY MAJOR AREAS OF FIRE ORIGIN AND SOURCES OF IGNITION - 1997

AREA OF ORIGIN	SOURCE OF IGNITION	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
KITCHEN/COOKING AREA	STOVE/TOP BURNER (FIRE IN PAN)	185	38	1	30	1,947,297
	STOVE/TOP BURNER (DEEP FAT FRYER/POT)	81	19	0	25	1,887,301
	OTHER SMOKER'S MTL./OPEN FLAMES	22	5	1	0	228,875
	STOVE/TOP BURNER (OTHER CIRCUMSTANCES)	81	14	3	13	480,503
	OVEN OF STOVE/RANGE	40	9	0	5	340,177
	OTHER COOKING EQPT.	29	7	0	2	501,488
	OTHER	34	8	0	1	308,085
	AREA OF ORIGIN TOTAL	432	100	5	76	5,491,506
STRUCTURAL AREAS	SMOKER'S MATERIAL	17	8	2	10	545,699
	EXPOSURE FROM DETACHED STRUCTURE FIRE	37	18	0	1	2,885,375
	PERMANENT ELECTRICAL WIRING/CABLE	17	8	0	0	988,163
	OTHER	35	17	0	5	1,958,218
	OTHER SMOKER'S MTL./OPEN FLAMES	25	12	0	1	541,811
	OTHER HEATING EQPT.	31	15	4	5	1,840,715
	OTHER ELECTRICAL EQPT.	20	10	0	2	711,385
	OTHER EXPOSURE FIRES	20	10	0	1	793,672
	AREA OF ORIGIN TOTAL	202	100	6	25	10,241,038
SLEEPING (UNDER 5 OCCUPANTS)	SMOKER'S MATERIAL	38	19	1	24	734,335
	MATCH/LIGHTER (NOT WITH SMOKING)	53	28	0	16	1,399,444
	CANDLE, TAPER	30	16	1	7	471,518
	OTHER ELECTRICAL EQPT.	12	6	0	0	440,728
	OTHER APPLIANCES/EQPT.	14	7	0	0	238,635
	INCANDESCENT LAMP/LIGHTBULB/HEAT LAMP	17	9	0	3	479,958
	OTHER	29	15	0	11	2,021,980
	AREA OF ORIGIN TOTAL	191	100	2	61	5,786,598

(CONTINUED)



# HOME FIRES BY MAJOR AREAS OF FIRE ORIGIN AND SOURCES OF IGNITION - 1997

AREA OF ORIGIN	SOURCE OF IGNITION	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
LIVING/REC./FAMILY ROOM, LOUNGE, DEN	SMOKER'S MATERIAL	60	32	3	18	2,311,573
	MATCH/LIGHTER (NOT WITH SMOKING)	24	13	0	3	627,488
	CANDLE, TAPER	34	18	1	7	646,713
	FIREPLACE	17	9	0	0	278,505
	OTHER HEATING EQPT.	13	7	0	0	491,392
	OTHER ELECTRICAL EQPT.	14	7	0	2	440,250
	OTHER	25	13	0	4	1,235,459
	AREA OF ORIGIN TOTAL	187	100	4	34	6,031,380
LAUNDRY AREA	SMOKER'S MATERIAL	7	7	0	1	139,659
	DRYER FOR CLOTHES	59	61	0	3	786,337
	OTHER SMOKER'S MTL./OPEN FLAMES	6	6	0	2	17,253
	OTHER APPLIANCES/EQPT.	5	5	0	0	110,288
	OTHER	19	20	0	6	552,970
	AREA OF ORIGIN TOTAL	96	100	0	12	1,606,505
EXTERIOR WALL	MATCH/LIGHTER (NOT WITH SMOKING)	7	8	0	1	36,417
	EXPOSURE FROM DETACHED STRUCTURE FIRE	35	41	0	1	417,822
	EXPOSURE FROM 'OPEN' RUBBISH/CAMP FIRE	10	12	0	0	456,160
	EXPOSURE FROM UNCLASSIFIED SOURCE	7	8	0	0	184,014
	OTHER SMOKER'S MTL./OPEN FLAMES	9	10	0	1	95,302
	OTHER EXPOSURE FIRES	5	6	0	0	27,324
	OTHER	13	15	1	1	316,000
	AREA OF ORIGIN TOTAL	86	100	1	4	1,533,039
OTHER	OTHER	33	39	0	4	500,900
	SMOKER'S MATERIAL	6	7	0	0	16,628
	MATCH/LIGHTER (NOT WITH SMOKING)	37	44	0	4	317,684
	OTHER HEATING EQPT.	9	11	0	3	328,868
	AREA OF ORIGIN TOTAL	85	100	0	11	1,164,080
TOTAL		1279	100	18	223	31,854,144

Commentary: Most kitchen fires started on the stove/top burner (71%) and these caused 89% of the fire injuries in kitchens. Major sources of ignition in bedrooms were smoker's material (19%), match/lighter (not with smoking) (28%); and in living rooms, smoker's material (32%), and candles (18%). Of the fires in the laundry area, 61% started in the clothes dryer.

# HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Kitchen/Cooking Area

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
STOVE/TOP BURNER (FIRE IN PAN)	OVERHEATED COOKING OIL, GREASE, WAX	OTHER	8	2	0	4	117,846
		COOKING OIL/FAT	96	22	0	11	1,141,628
	OTHER	OTHER	61	14	1	15	687,823
STOVE/TOP BURNER (DEEP FAT FRYER/POT)	OVERHEATED COOKING OIL, GREASE, WAX	OTHER	5	1	0	1	143,073
		COOKING OIL/FAT	65	15	0	24	1,307,964
	OTHER	OTHER	11	3	0	0	236,264
STOVE TOP BURNER (OTHER CIRCUMSTANCES)	COMBUSTIBLE PLACED TOO CLOSE TO HEAT	OTHER	10	2	3	4	46,250
		PLASTICS: NOT CELLULOSE NITRATE	8	2	0	2	14,078
	OTHER	OTHER	43	10	0	7	420,175
OVEN OF STOVE/RANGE	OVERHEATED COOKING OIL, GREASE, WAX	OTHER	1	0	0	0	7,552
		COOKING OIL/FAT	5	1	0	0	3,827
	COMBUSTIBLE PLACED TOO CLOSE TO HEAT	OTHER	3	1	0	0	6,564
		CLOTHING: SYNTHETIC	2	0	0	1	15,201
		UNCLASSIFIED	2	0	0	0	851
	IGNORANCE OF HAZARD	OTHER	6	1	0	0	9,457
		COOKING OIL/FAT	4	1	0	1	113
	OTHER	OTHER	17	4	0	3	298,612
OTHER	OTHER	OTHER	85	20	1	3	1,036,228
TOTAL			432	100	5	76	5,491,506

Commentary: The most common ignition scenario (41%) in Alberta home kitchens is overheated cooking oil (includes fat and grease). These represent 174 fires or 56% of stove top burner fires. Cooking oil fires erupted most frequently in pans (59%) and deep-fat fryers or pots (40%) causing 20% and 33% of kitchen fire injuries.

# HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Sleeping (Under 5 Occupants)

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
MATCH/LIGHTER (NOT WITH SMOKING)	CHILD PLAYING WITH	OTHER	44	23	0	9	1,082,093
	OTHER	OTHER	9	5	0	7	317,351
SMOKER'S MATERIAL	SMOKER'S MATERIAL	OTHER	16	8	1	18	541,356
		MATTRESS/PILLOW	12	6	0	4	107,597
	OTHER	OTHER	8	4	0	2	85,382
CANDLE, TAPER	ACCIDENT	OTHER	17	9	0	3	182,188
	MISUSE OF SOURCE OF IGNITION UNCLASSIFIED	OTHER	4	2	0	0	103,490
		CLOTHING/TEXTILES-UNKNOWN	2	1	0	1	61,546
	OTHER	OTHER	7	4	1	3	124,292
INCANDESCENT LAMP/ LIGHTBULB/ HEAT LAMP	ACCIDENT	MATTRESS/PILLOW	1	1	0	0	2,000
		BEDDING	1	1	0	0	450
		PAPER STOCK	1	1	0	0	31,474
	COMBUSTIBLE PLACED TOO CLOSE TO HEAT	BEDDING	1	1	0	1	121,295
		PAPER STOCK	1	1	0	1	25,000
		FLOOR COVERING: CARPET/RUG	1	1	0	0	25,000
		DRAPERY, CURTAIN/BLIND	1	1	0	0	46,355
	OTHER	OTHER	10	5	0	1	228,384
UNKNOWN/ UNCLASSIFIED	OTHER	OTHER	23	12	0	7	1,926,907
OTHER	OTHER	OTHER	32	17	0	4	774,436
TOTAL			191	100	2	61	5,786,596

Commentary: Children playing with matches/lighters setting fire to bedding and other combustibles (23%), misuse of smoker's material leading to the ignition of mattress/pillow/bedding/other materials (18%), and candles igniting nearby combustibles (16%) were the leading ignition scenarios in bedrooms.

# HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Living/Rec./Family Room, Lounge, Den

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
SMOKER'S MATERIAL	SMOKER'S MATERIAL	OTHER	8	4	0	1	150,339
		FURNITURE (UPHOLSTERED)	38	20	3	13	2,045,479
	OTHER	OTHER	14	7	0	4	115,755
CANDLE, TAPER	ACCIDENT	OTHER	21	11	0	4	481,294
	OTHER	OTHER	13	7	1	3	165,419
MATCH/LIGHTER NOT WITH SMOKING	CHILD PLAYING WITH	OTHER	7	4	0	2	144,436
		FURNITURE (UPHOLSTERED)	3	2	0	0	245,930
	ARSON/SET FIRE-UNKNOWN	OTHER	3	2	0	0	183,000
		MATERIAL FIRST IGNITED-UNKNOWN	2	1	0	0	9,000
	OTHER	OTHER	9	5	0	1	45,122
FIREPLACE	CHILD PLAYING WITH	FURNITURE (UPHOLSTERED)	1	1	0	0	11,170
		FLOOR COVERING: CARPET/RUG	2	1	0	0	9,891
	IGNORANCE OF HAZARD	OTHER	5	3	0	0	36,366
	OTHER	OTHER	9	5	0	0	221,078
OTHER	OTHER	OTHER	52	28	0	6	2,167,101
TOTAL			187	100	4	34	6,031,380

Commentary: The most frequent ignition scenarios in living room fires is carelessly disposed smoker's material igniting upholstered furniture (20%). The other frequent ignition scenarios are candles igniting combustibles (18%), and children playing with matches or lighters (8%).

# HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Structural Areas

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
HEATING EQUIPMENT	OTHER	OTHER	29	20	4	5	1,806,564
PERMANENT ELECTRICAL WIRING/CABLE	ELECTRICAL SHORT CIRCUIT	OTHER	7	5	0	0	586,269
		ELECTRIC INSULATION IN ELECTRIC EQUIPMENT	3	2	0	0	179,194
	OTHER	OTHER	6	4	0	0	198,700
SMOKER'S MATERIAL	SMOKER'S MATERIAL	AGRICULTURAL/- FORESTRY PRODUCTS- UNCLASSIFIED	9	6	0	6	409,049
		OTHER	7	5	2	4	130,650
EXPOSURE FROM DETACHED STRUCTURE FIRE	ARSON FOR VENGEFUL/ SPITEFUL PURPOSES	ROOF COVERING: NOT WOOD	2	1	0	0	1,088,354
		EXTERIOR WALL COVER, EAVE	2	1	0	1	1,007,795
	IGNORANCE OF HAZARD	ROOF COVERING: NOT WOOD	1	1	0	0	3,128
		EXTERIOR WALL COVER, EAVE	1	1	0	0	1,000
	OTHER	OTHER	5	3	0	0	45,787
		OTHER	17	12	0	2	1,319,814
OTHER	OTHER	OTHER	54	38	0	6	1,636,399
TOTAL			143	100	6	24	8,412,703

Commentary: The three major ignition scenarios in structural areas involved heating equipment (20%), permanent electrical wiring (11%), and smoker's material (11%).

# HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Laundry Area

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
DRYER FOR CLOTHES	ELECTRICAL SHORT CIRCUIT	OTHER	2	2	0	1	344
		ELECTRIC INSULATION IN ELECTRIC EQUIPMENT	10	10	0	1	57,141
	PART FAILURE, LEAK, BREAK	OTHER	10	10	0	0	325,829
	IGNORANCE OF HAZARD	OTHER	3	3	0	0	6,611
		FIBRES/FIBRE PRODUCTS	6	6	0	0	12,879
	OTHER	OTHER	28	29	0	1	383,533
UNKNOWN/ UNCLASSIFIED	OTHER	OTHER	11	11	0	1	205,983
OTHER	OTHER	OTHER	26	27	0	8	614,185
TOTAL			96	100	0	12	1,606,505

Commentary: The major ignition scenario in the laundry area (62%) was the dryer for clothes, igniting various materials, due to electrical short circuits, part failure/break or ignorance of hazard.

# HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Exterior Wall

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
EXPOSURE FROM DETACHED STRUCTURE FIRE	SUSPECTED ARSON	EXTERIOR WALL COVER, EAVE	6	7	0	0	202,695
		EXTERIOR TRIM/ APPURTENCE	2	2	0	0	10,640
	OTHER	OTHER	27	31	0	1	204,487
EXPOSURE FROM 'OPEN' RUBBISH/CAMP FIRE	IGNORANCE OF HAZARD	PLASTICS: NOT CELLULOSE NITRATE	8	9	0	0	332,760
	OTHER	OTHER	2	2	0	0	123,400
SMOKER'S MATERIAL OPEN FLAMES	OTHER	OTHER	9	10	0	1	95,302
MATCH/LIGHTER (NOT WITH SMOKING)	ARSON FOR VENGEFUL/ SPITEFUL PURPOSES	EXTERIOR WALL COVER, EAVE	1	1	0	0	5,000
		GASOLINE	2	2	0	0	27,000
	VANDALISM, MISCHIEF, NO CHARGES LAID	ROOF COVERING: NOT WOOD	1	1	0	0	500
		PAPER/PACKING MATERIAL	1	1	0	0	1
	OTHER	OTHER	2	2	0	1	3,916
		OTHER	2	2	0	1	3,916
EXPOSURE FROM UNCLASSIFIED SOURCE	ARSON/SET FIRE-UNKNOWN	EXTERIOR WALL COVER, EAVE	1	1	0	0	5,000
		MATERIAL FIRST IGNITED- UNKNOWN	1	1	0	0	800
	SMOKER'S MATERIAL	EXTERIOR WALL COVER, EAVE	1	1	0	0	500
	SMOKER'S MATERIAL	WOOD/WOODEN ITEMS/PLYWOOD	1	1	0	0	2,314
	OTHER	OTHER	3	3	0	0	175,400
OTHER	OTHER	OTHER	18	21	1	1	343,324
TOTAL			86	100	1	4	1,533,039

Commentary: Exterior walls, a significant part of structural areas of fire origin, were analysed separately. Approximately 58% of exterior walls were from exposure fires.



## HOME FIRES BY MAJOR IGNITION SCENARIOS - 1997

Area Of Fire Origin=Heating Equipment Room

SOURCE OF IGNITION	ACT OR OMISSION	MATERIAL FIRST IGNITED	NO. OF FIRES	% OF FIRES	DEATHS	INJURIES	\$ LOSSES
CENTRAL HEATING UNIT, FURNACE/ BOILER	OTHER	OTHER	35	44	0	5	1,032,361
SERVICE WATER HEATER	OTHER	OTHER	14	18	0	5	248,141
OTHER ELECTRICAL EQUIPMENT	OTHER	OTHER	8	10	0	0	267,820
OTHER	OTHER	OTHER	23	29	0	4	1,058,087
TOTAL			80	100	0	14	2,606,409

Commentary: Furnaces (44%) and water heaters (18%) comprise the two major sources of ignition in heating equipment room ignition scenarios. When known, most of these fires were the result of part failure, leak or break, electrical short circuits, or combustibles placed too close.

## MAJOR CAUSES OF HOME FIRES IN ALBERTA - 1997

FIRE CAUSES	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
OTHER COOKING	214	13	4	20	35	13	2,527,170	5
SMOKING	197	12	7	35	62	22	5,673,155	11
OVERHEATED COOKING OIL FIRE	172	10	0	0	35	13	2,503,320	5
ARSON/SET FIRE	163	10	0	0	18	6	5,131,797	10
HEATING EQPT. RELATED	158	10	4	20	20	7	5,908,945	11
CHILD FIREPLAY	106	6	0	0	24	9	2,592,898	5
ELECTRICAL DISTRIB. EQPT.	87	5	0	0	5	2	5,154,895	10
EXPOSURE FIRE	76	5	0	0	2	1	2,549,615	5
CLOTHES DRYER	65	4	0	0	3	1	794,589	2
APPLIANCE/EQUIP-MENT RELATED	54	3	0	0	3	1	1,546,909	3
OTHER CAUSES/UNKNOWN	360	22	5	25	72	26	17,743,021	34
TOTAL	1,652	100	20	100	279	100	52,126,314	100

Commentary: The major known causes of home fires in 1997 were Other Cooking (fires other than Overheated Cooking Oil Fires, 13%) Smoking 12%, Overheated Cooking Oil Fire (10%), Heating Equipment Related (10%), Arson/Set Fires (10%). Smoking was the number one cause of fire deaths and cooking, the number one cause of fire injuries in homes.

## MAJOR CAUSES OF HOME FIRES IN ALBERTA 1993 - 1997

FIRE CAUSES	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
OVERHEATED COOKING OIL FIRE	2,786	15	8	3	468	18	25,854,685	6
OTHER COOKING	2,664	14	22	8	307	11	27,645,010	7
SMOKING	2,116	11	87	32	524	20	40,666,290	10
HEATING EQPT. RELATED	2,018	11	27	10	249	9	50,054,507	12
ARSON/SET FIRE	1,668	9	18	7	159	6	42,226,314	10
CHILD FIREPLAY	1,345	7	20	7	332	12	27,525,317	7
ELECTRICAL DISTRIB. EQPT.	1,023	5	6	2	75	3	39,683,622	10
EXPOSURE FIRE	685	4	0	0	12	0	10,721,011	3
CLOTHES DRYER	673	4	0	0	27	1	3,809,363	1
APPLIANCE/EQUIP-MENT RELATED	619	3	4	1	38	1	12,834,108	3
OTHER CAUSES/UNKNOWN	3,475	18	79	29	479	18	126,248,698	31
TOTAL	19,072	100	271	100	2670	100	407,268,925	100

Commentary: The major known causes of home fires during the five-year period were Overheated Cooking Oil fires (15%), Other Cooking (14%), Smoking (11%), Heating Equipment Related (11%), Arson/Set Fires (9%) and Child Fireplay (7%). The largest number of fire deaths (32%) and fire injuries (29%) were caused by careless smoking and cooking, respectively.

# HOME FIRES BY SMOKE ALARM OPERATION - 1997

SMOKE ALARM INSTALLATION	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
NOT INSTALLED	662	40	10	50	57	20	21,867,653	42
INSTALLED	990	60	10	50	222	80	30,258,661	58
TOTAL	1652	100	20	100	279	100	52,126,314	100

ACTIVATION OF SMOKE ALARMS	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
ACTIVATED	446	45	1	10	114	51	13,178,603	44
NOT ACTIVATED	312	32	6	60	73	33	5,182,786	17
UNKNOWN	232	23	3	30	35	16	11,897,272	39
TOTAL	990	100	10	100	222	100	30,258,661	100

ALARM ASSISTANCE TO OCCUPANTS	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
UNKNOWN	2	0	0	0	0	0	6,756	0
ASSISTED OCCUPANTS TO EVACUATE	279	63	1	100	85	75	8,181,036	62
DID NOT ASSIST OCCUPANTS	165	37	0	0	29	25	4,990,809	38
TOTAL	446	100	1	100	114	100	13,178,603	100

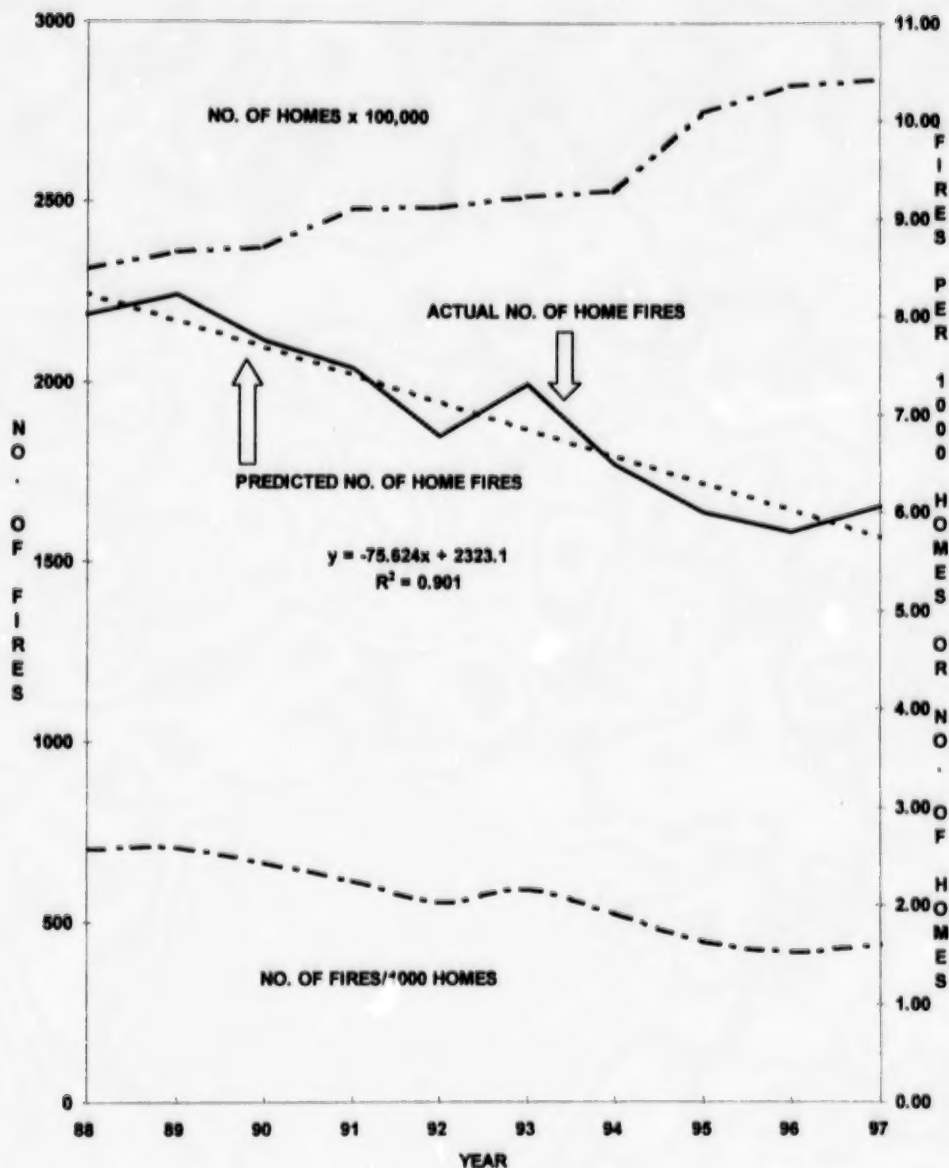
REASONS - ALARMS DID NOT ASSIST	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
UNABLE TO RESPOND	1	1	0	.	1	3	15,000	0
HANDICAPPED	2	1	0	.	1	3	105,201	2
UNDER INFLUENCE OF ALCOHOL/DRUGS	1	1	0	.	0	0	101	0
UNSUITABLE LOCATION	1	1	0	.	0	0	20,000	0
UNKNOWN	17	10	0	.	3	10	927,855	19
UNNECESSARY TO EVACUATE	71	43	0	.	9	31	543,839	11
OTHER	72	44	0	.	15	52	3,378,813	68
TOTAL	165	100	0	.	29	100	4,990,809	100

## HOME FIRES BY SMOKE ALARM OPERATION - 1997

REASONS - ALARMS NOT ACTIVATED	FIRES	% OF FIRES	DEATHS	% OF DEATHS	INJURIES	% OF INJURIES	\$ LOSSES	% OF \$ LOSSES
UNSUITABLE LOCATION	4	1	0	0	1	1	34,604	1
NO BATTERY	68	22	5	83	15	21	1,493,805	29
DEAD BATTERY	16	5	0	0	1	1	102,868	2
ELECTRICITY OFF	14	4	1	17	4	5	347,842	7
ELECTRICITY NOT CONNECTED	13	4	0	0	18	25	437,297	8
MECHANICAL FAILURE	9	3	0	0	1	1	53,868	1
NOT ENOUGH SMOKE	114	37	0	0	15	21	1,264,771	24
UNKNOWN	44	14	0	0	12	16	846,828	16
OTHER	30	10	0	0	6	8	600,903	12
TOTAL	312	100	6	100	73	100	5,182,786	100

Commentary: In 40% of homes that had fires there were no smoke alarms installed. In homes where smoke alarms were installed, the two main reasons the alarms did not activate were not enough smoke (35%) and lack of a power source (38%). No battery (22%), electricity not connected (4%), dead battery (5%) and electricity off (4%), were the reasons for lack of a power source. Smoke alarms were absent or not activated in 80% of the fire fatalities.

# TRENDS IN ALBERTA HOME FIRES 1988 - 1997



**Commentary:** Despite a gradual increase in the provincial housing stock, the actual number of home fires and the number of fires per 1,000 homes declined steadily between 1988 - 1997. A linear regression equation ( $y=mx+c$ ), where the slope,  $m=-75.62$  and intercept,  $c=2,323$  can be used to predict the number of fires ( $y$ ), likely to occur for any year ( $x$ ). For example, the predicted number of home fires, for year 1998 is 1,569.





## **SECTION 4**



# **Municipal Fire Loss Statistics**

**Fire Commissioner's  
Statistical Report**

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**MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING  
DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 1	GRANDE PRAIRIE CTY #1	13,750	71	1,870,899	5.2	136.07	940	18,781,527	6.8	122.05
	BEAVERLODGE	1,997	7	70,294	3.5	35.20	43	526,480	2.2	26.36
	HYTHE	712	-	-	-	-	14	141,889	2.0	19.93
	SEXSMITH	1,578	11	57,036	7.0	36.14	53	698,910	3.4	44.29
	WEMBLEY	1,523	3	23,591	2.0	15.49	37	232,412	2.4	15.26
COUNTY 2	VULCAN CTY #2	3,829	12	94,678	3.1	24.73	151	2,937,227	3.9	76.71
	VULCAN	1,537	-	-	-	-	19	195,302	1.2	12.71
	ARROWWOOD	163	-	-	-	-	1	2,528	0.8	1.55
	CARMANGAY	258	-	-	-	-	6	4,023	2.3	1.56
	CHAMPION	362	-	-	-	-	8	109,638	2.2	30.29
	LOMOND	170	-	-	-	-	3	29,173	1.8	17.16
	MILO	121	-	-	-	-	-	-	-	-
COUNTY 3	PONOKA CTY #3	8,313	29	901,667	3.5	108.46	359	6,235,341	4.3	75.01
	PONOKA	8,149	4	11,000	0.7	1.79	96	1,194,145	1.6	19.42
	RIMBEY	2,106	4	169,108	1.9	80.30	43	1,003,541	2.0	47.65
	PARKLAND BEACH S.V.	97	-	-	-	-	2	65,450	2.1	67.47
COUNTY 4	NEWELL CTY #4	6,421	23	733,789	3.6	114.28	339	6,655,301	5.3	103.65
	BROOKS	10,093	23	543,805	2.3	53.88	182	5,905,004	1.8	58.51
	BASSANO	1,272	-	-	-	-	13	205,698	1.0	16.17
	DUCHES	693	-	-	-	-	7	65,433	1.0	9.44
	ROSEMARY	332	-	-	-	-	1	889	0.3	0.27
	TILLEY	368	-	-	-	-	4	163,787	1.1	44.51
COUNTY 5	WARNER CTY #5	3,561	10	384,635	2.8	108.01	135	2,313,140	3.8	64.96
	WARNER	421	-	-	-	-	4	49,108	1.0	11.66
	MILK RIVER	929	-	-	-	-	6	671,362	0.6	72.27
	RAYMOND	3,056	1	42,265	0.3	13.83	43	1,204,841	1.4	39.43
	COUTTS	386	-	-	-	-	3	46,118	0.8	11.95
	STIRLING	874	2	9,947	2.3	11.38	15	339,824	1.7	38.88
COUNTY 6	STETTLER CTY #6	5,278	29	476,908	5.5	90.36	214	2,483,920	4.1	47.06
	STETTLER	5,220	10	42,587	1.9	8.16	82	1,768,825	1.6	33.89
	BIG VALLEY	308	-	-	-	-	12	131,704	3.9	42.76
	BOTHA	194	-	-	-	-	3	70,890	1.5	36.44
	DONALDA	241	-	-	-	-	1	40,250	0.4	16.70

(CONTINUED)

# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 6	GADSBY	40	-	-	-	-	4	80,152	10.0	200.38
	ROCHON SANDS S.V.	86	-	-	-	-	3	58,715	3.5	68.27
	WHITE SANDS S.V.	49	-	-	-	-	-	-	-	-
COUNTY 7	THORHILD CTY #7	3,077	5	13,821	1.6	4.43	221	3,149,744	7.2	102.38
	THORHILD	485	-	-	-	-	17	474,351	3.5	97.60
	RADWAY	-	-	-	-	-	4	32,000	-	-
COUNTY 8	FORTY MILE CTY #8	3,230	21	475,600	6.5	147.24	203	2,885,101	6.3	89.32
	FOREMOST	555	-	-	-	-	4	108,219	0.7	19.46
	BOW ISLAND	1,688	4	119,253	2.4	70.65	42	2,848,028	2.5	168.72
	BURDETT	286	-	-	-	-	7	25,948	2.4	9.07
COUNTY 9	BEAVER CTY #9	5,659	18	302,461	2.8	53.45	298	10,435,278	5.3	184.40
	RYLEY	465	1	2,500	2.2	5.38	12	116,888	2.6	25.14
	TOFIELD	1,726	2	2,700	1.2	1.56	26	701,694	1.5	40.65
	VIKING	1,081	1	1,000	0.9	0.93	18	580,330	1.7	53.68
	HOLDEN	397	-	-	-	-	8	1,382,312	2.0	343.15
COUNTY 10	WETASKIWIN CTY #10	10,467	25	616,083	2.4	58.86	341	9,246,605	3.3	88.34
	CRYSTAL SPRINGS S.V.	55	-	-	-	-	-	-	-	-
	MA-ME-O BEACH S.V.	77	2	27,000	26.0	350.65	8	293,452	10.4	381.11
	MILLET	1,894	3	115,261	1.6	60.86	28	1,131,358	1.5	59.73
	SILVER BEACH S.V.	47	-	-	-	-	-	-	-	-
	GRANDVIEW S.V.	54	-	-	-	-	-	-	-	-
	ARGENTIA BEACH S.V.	4	1	80,000	250.0	20000.0	1	80,000	25.0	2000.00
	POPLAR BAY S.V.	66	-	-	-	-	-	-	-	-
	NORRIS BEACH S.V.	23	-	-	-	-	1	12,000	4.3	52.17
COUNTY 11	BARRHEAD CTY #11	5,870	18	2,597,998	3.1	442.59	217	5,507,599	3.7	93.83
	BARRHEAD	4,239	5	44,324	1.2	10.46	54	1,375,765	1.3	32.45
COUNTY 12	ATHABASCA CTY #12	7,415	25	3,108,988	3.4	419.28	223	7,465,353	3.0	100.68
	ATHABASCA	2,313	1	30,000	0.4	12.97	44	1,230,209	1.9	53.19
	BOYLE	802	-	-	-	-	14	291,087	1.7	36.30
	ISLAND LAKE S.V.	187	-	-	-	-	4	109,343	2.1	58.47
	SUNSET BEACH S.V.	33	-	-	-	-	1	4,500	3.0	13.64
	MEWATHA BEACH S.V.	83	-	-	-	-	3	3,649	3.6	4.40
	SOUTH BAPTISTE S.V.	68	-	-	-	-	8	250,458	12.1	379.48

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# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 12	BONDISS S.V.	86	.	.	.	.	1	9,418	1.2	10.95
	ISLAND LAKE SOUTH S.V.	78	2	86,320	26.3	1135.79	2	86,320	2.6	113.58
	WHITE GULL S.V.	24	.	.	.	.	4	6,002	16.7	25.01
	WEST BAPTISTE S.V.	51	.	.	.	.	1	81,116	2.0	159.05
	WHISPERING HILLS S.V.	79	.	.	.	.	.	.	.	.
COUNTY 13	SMOKY LAKE CTY #13	2,782	10	465,498	3.8	167.32	152	2,221,230	5.5	79.84
	SMOKY LAKE	1,087	1	19,000	0.9	17.48	18	239,125	1.7	22.00
	VILHA	274	3	6,333	10.9	23.11	5	28,158	1.8	10.28
	WARSPITE	75	.	.	.	.	3	28,000	4.0	37.33
	WASKATEHAU	237	.	.	.	.	5	37,822	2.1	15.98
	BUFFALO LAKE METIS SETTLEMENT	881	.	.	.	.	2	255,400	0.2	28.99
	KIKINO METIS SETTLEMENT	944	.	.	.	.	1	1,500	0.1	0.16
COUNTY 14	LACOMBE CTY #14	10,081	30	491,763	3.0	48.78	439	5,807,272	4.4	57.61
	LACOMBE	8,018	14	45,759	1.7	5.71	101	1,691,348	1.3	23.59
	ALIX	765	1	115,800	1.3	151.11	9	183,547	1.2	23.99
	BENTLEY	987	.	.	.	.	17	188,320	1.7	17.05
	BLACKFALDS	2,001	2	280	1.0	0.13	34	683,009	1.7	34.13
	CLIVE	517	1	102,701	1.9	198.65	6	287,114	1.2	55.53
	ECKVILLE	901	3	2,322	3.3	2.58	30	973,193	3.3	108.01
	GULL LAKE S.V.	149	1	101,509	6.7	681.27	10	303,830	6.7	203.91
	MIRROR	487	.	.	.	.	9	73,464	1.8	15.09
	BIRCHCLIFF S.V.	102	.	.	.	.	.	.	.	.
	HALF MOON BAY S.V.	53	.	.	.	.	.	.	.	.
	SUNBREAKER COVE S.V.	86	.	.	.	.	3	95,745	3.5	111.33
COUNTY 16	WHEATLAND CTY #16	6,714	30	941,103	4.5	140.17	293	8,804,295	4.4	131.13
	STRATHMORE	5,471	10	49,733	1.8	9.09	73	782,761	1.3	14.31
	GLEICHEN	335	1	14,993	3.0	44.76	15	394,494	4.5	117.76
	CLUNY	.	.	.	.	.	1	685	.	.
	HUSSAR	157	1	2,000	6.4	12.74	2	4,500	1.3	2.87
	ROCKYFORD	346	1	2,836	2.9	8.20	7	102,143	2.0	29.52
	STANDARD	366	1	4,300	2.7	11.75	7	31,372	1.9	8.57

(CONTINUED)

# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 17	MOUNTAIN VIEW CTY #17	11,277	53	597,236	4.7	52.06	629	14,403,408	5.6	127.72
	DIDSBURY	3,553	1	10,280	0.3	2.89	67	1,196,855	1.9	33.69
	OLDS	5,815	14	113,819	2.4	19.57	102	2,571,410	1.8	44.22
	SUNDRE	2,028	6	22,301	3.0	11.00	48	745,149	2.3	36.74
	CARSTAIRS	1,887	2	26,550	1.1	14.07	23	169,982	1.2	9.01
	CREMONA	380	.	.	.	.	7	19,886	1.8	5.23
COUNTY 18	PAINTERTH CTY #18	2,316	16	491,011	6.9	212.01	114	1,853,892	4.9	80.05
	CASTOR	970	1	101,000	1.0	104.12	11	441,435	1.1	45.51
	CORONATION	1,166	1	6,100	0.9	5.23	29	565,772	2.5	48.52
	HALKIRK	131	.	.	.	.	17	56,903	13.0	43.44
COUNTY 19	ST. PAUL CTY #19	6,335	36	1,116,252	5.7	176.20	309	5,371,352	4.9	84.79
	ST. PAUL	4,861	12	241,260	2.5	49.63	96	1,271,620	2.0	26.16
	ELK POINT	1,492	2	313,580	1.3	210.17	18	481,688	1.2	32.28
	HORSESHOE BAY S.V.	37	.	.	.	.	1	23,000	2.7	62.16
COUNTY 21	TWO HILLS CTY #21	2,753	16	281,775	5.8	102.35	185	1,982,584	6.7	72.02
	TWO HILLS	1,040	.	.	.	.	18	854,166	1.5	82.13
	DERWENT	110	.	.	.	.	1	20,829	0.9	18.75
	MYRNAM	294	1	428,000	3.4	1455.78	2	496,000	0.7	168.71
	WILLINGDON	309	1	1,000	3.2	3.24	6	46,065	1.9	14.91
	HAIRY HILL	.	.	.	.	.	3	76,843	.	.
COUNTY 22	CAMROSE CTY #22	7,613	43	531,579	5.6	69.83	405	5,621,191	5.3	73.84
	BASHAW	774	.	.	.	.	11	61,354	1.4	7.93
	BARLF	351	.	.	.	.	3	33,205	0.9	9.46
	BITTERN LAKE	193	.	.	.	.	1	2,000	0.5	1.04
	EDBERG	137	.	.	.	.	2	198,750	1.5	145.07
	FERINTOSH	130	.	.	.	.	3	133,250	2.3	102.50
	HAY LAKES	352	1	15,565	2.8	44.22	6	280,388	1.7	79.66
	NEW NORWAY	270	.	.	.	.	3	19,878	1.1	7.36
	ROSALIND	195	.	.	.	.	.	.	.	.
COUNTY 23	RED DEER CTY #23	17,126	61	1,507,918	3.6	88.05	625	12,262,564	3.6	71.72
	INWISFAIL	6,116	7	14,591	1.1	2.39	70	540,074	1.1	8.83
	SYLVAN LAKE	5,178	5	183,929	1.0	35.52	62	1,432,641	1.2	27.67
	BOWDEN	1,014	.	.	.	.	20	117,693	2.0	11.61

(CONTINUED)

# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 23	DELBURNE	841	.	.	.	.	8	817,109	1.2	98.27
	ELNORA	247	.	.	.	.	4	85,392	1.6	26.47
	PENHOLD	1,825	9	98,452	5.5	60.59	32	247,439	2.0	15.23
	WORGLEWOLD S.V.	281	1	1,500	3.6	5.34	1	1,500	0.4	0.53
	JARVIS BAY S.V.	83	.	.	.	.	.	.	.	.
COUNTY 24	VERMILION RV. CTY #24	7,553	36	1,317,226	4.8	174.40	420	8,708,521	5.6	115.30
	KITSCOTY	672	2	4,350	3.0	6.47	12	85,952	1.8	12.79
	VERMILION	4,303	11	84,518	2.6	19.64	64	815,753	1.5	18.96
	DEWBERRY	185	.	.	.	.	2	3,600	1.1	1.95
	MARWAYNE	449	.	.	.	.	7	383,583	1.6	85.43
	PARADISE VALLEY	141	.	.	.	.	3	1,354,800	2.1	980.85
COUNTY 25	LEDUC CTY #25	12,361	64	1,521,380	5.2	123.08	672	12,824,555	5.4	103.75
	CALMAR	1,797	8	1,828	4.5	1.02	36	790,900	2.0	44.01
	DEVON	4,496	18	20,081	3.5	4.47	104	365,758	2.3	8.14
	NEW SAREPTA	359	.	.	.	.	16	490,792	4.5	136.71
	THORSBY	725	3	41,950	4.1	57.86	10	149,717	1.4	20.65
	WARBURG	549	.	.	.	.	7	132,078	1.3	24.06
	ITASKA BEACH S.V.	8	.	.	.	.	5	20,471	62.5	255.89
	GOLDEN DAYS S.V.	92	.	.	.	.	.	.	.	.
	SUNDANCE BEACH S.V.	35	.	.	.	.	.	.	.	.
	BEAUMONT	5,810	9	190,753	1.5	32.83	54	938,906	0.9	16.16
COUNTY 26	LETHBRIDGE CTY #26	9,290	71	1,657,864	7.6	178.46	463	8,957,985	5.0	98.43
	COALDALE	5,731	1	19,850	0.2	3.46	71	908,378	1.2	15.85
	PICTURE BUTTE	1,669	4	144,581	2.4	86.63	32	1,715,477	1.9	102.78
	BARONS	285	2	49,000	7.0	171.93	11	306,375	3.9	108.20
	NOBLEFORD	558	1	48,629	1.8	87.15	2	272,515	0.4	48.84
	COALHURST	1,465	1	1,600	0.7	1.09	33	230,389	2.3	15.73
COUNTY 27	MINBURN CTY #27	3,405	20	138,674	5.9	40.73	219	2,459,844	6.4	72.24
	MINBURN	95	1	15,450	10.5	162.63	3	38,450	3.2	40.47
	MANNVILLE	758	2	8,100	2.6	10.69	14	502,228	1.8	66.26
	VEGREVILLE	5,337	11	103,914	2.1	19.47	87	1,770,996	1.6	33.19
	INNISFREE	238	1	2,658	4.2	11.17	10	59,496	4.2	25.00
	LAVOY	119	.	.	.	.	1	35,000	0.8	29.41

(CONTINUED)



# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 28	LAC STE. ANNE CTY #28	8,737	18	242,991	1.8	27.81	251	6,238,467	2.9	71.40
	ONOWAY	788	-	-	-	-	11	207,094	1.4	26.28
	MAYERTHORPE	1,669	5	101,690	3.0	60.93	31	923,934	1.9	55.38
	ALBERTA BEACH S.V.	640	3	91,848	4.7	143.51	26	958,985	4.1	149.84
	CASTLE ISLAND S.V.	19	-	-	-	-	1	2,059	5.3	10.84
	SUNSET POINT S.V.	125	-	-	-	-	2	4,350	1.6	3.48
	SANGUDO	398	-	-	-	-	8	194,395	2.0	48.84
	WEST COVE S.V.	85	-	-	-	-	1	800	1.2	0.94
	YELLOWSTONE S.V.	97	-	-	-	-	-	-	-	-
	ROSS HAVEN S.V.	108	-	-	-	-	3	233,000	2.8	215.74
	VAL QUENTIN S.V.	123	-	-	-	-	3	6,300	2.4	5.12
	SILVER SANDS S.V.	105	-	-	-	-	1	15,000	1.0	14.29
	NAKAMUN PARK S.V.	14	-	-	-	-	-	-	-	-
	SOUTH VIEW S.V.	80	-	-	-	-	-	-	-	-
	BIRCH COVE S.V.	23	-	-	-	-	-	-	-	-
	SUNRISE BEACH S.V.	84	-	-	-	-	2	107,277	2.4	127.71
	SANDY BEACH S.V.	171	-	-	-	-	-	-	-	-
COUNTY 29	FLAGSTAFF CTY #29	4,015	22	533,780	5.5	132.95	249	3,379,453	6.2	84.17
	SEDEGWICK	937	1	34,250	1.1	36.55	8	899,687	0.9	96.02
	ALLIANCE	220	-	-	-	-	2	20,200	0.9	9.18
	DAYSLAND	679	1	500	1.5	0.74	11	298,288	1.6	43.93
	HARDISTY	808	1	7,000	1.2	8.66	21	530,493	2.6	65.68
	FORESTBURG	930	1	750,000	1.1	808.45	15	817,878	1.6	87.94
	GALAHAD	175	-	-	-	-	7	277,201	4.0	158.40
	HEISLER	195	-	-	-	-	3	14,022	1.5	7.19
	KILLAM	1,048	1	22,000	1.0	20.99	10	558,458	1.0	53.10
	LOUGHNEED	253	-	-	-	-	5	113,919	2.0	45.03
	STROME	269	2	88,500	7.4	329.00	4	99,566	1.5	37.01
COUNTY 30	LAMONT CTY #30	4,212	22	382,740	5.2	88.12	318	4,664,293	7.5	110.74
	LAMONT	1,581	1	100	0.6	0.06	15	3,490,952	0.9	220.81
	CHIPMAN	230	1	11,200	4.3	48.70	3	33,700	1.3	14.85
	MUNDARE	578	2	7,345	3.5	12.71	12	24,110	2.1	4.17
	ANDREW	484	3	60,813	6.2	125.65	10	95,519	2.1	19.74

(CONTINUED)

**MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING  
DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	TOTAL		AVERAGE	
							FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
COUNTY 30	BRUDERHEIM	1,198	2	180,132	1.7	133.67	20	488,275	1.7	39.09
COUNTY 31	PARKLAND CTY #31	24,769	57	1,608,243	2.3	64.93	730	17,798,847	2.9	71.86
	STONY PLAIN	8,274	8	74,000	1.0	8.94	84	1,131,458	1.0	13.67
	BETULA BEACH S.V.	3	-	-	-	-	-	-	-	-
	EDMONTON BEACH S.V.	425	1	5,613	2.4	13.21	7	137,377	1.6	32.32
	ENTWISTLE	453	1	2,700	2.2	5.98	15	128,948	3.3	28.46
	KAPASIWIN S.V.	12	-	-	-	-	-	-	-	-
	LAKEVIEW S.V.	15	-	-	-	-	3	17,428	20.0	116.19
	POINT ALISON S.V.	8	-	-	-	-	-	-	-	-
	SEBA BEACH S.V.	124	-	-	-	-	6	161,571	4.8	130.30
	WABAMUN	645	-	-	-	-	11	259,982	1.7	40.30
SP. MUNICIP. OF WOOD BUFFALO	WOOD BUFFALO SPECIALIZED MUNICIPALITY	2,135	24	3,302,139	11.2	1546.67	61	12,852,378	2.9	601.88
	FORT MCMURRAY	33,078	73	631,788	2.2	19.10	256	2,298,007	0.8	6.95
	ANZAC	-	-	-	-	-	-	-	-	-
	FORT CHIPEWYAN	-	1	10,000	-	-	3	51,000	-	-
	FORT MACKAY	-	-	-	-	-	2	112,000	-	-
	SAPRAE CREEK	-	-	-	-	-	-	-	-	-
	CONKLIN	-	1	5,000	-	-	1	5,000	-	-
	JANVIER	-	1	7,943	-	-	2	8,943	-	-
	MARIANA LAKE	-	1	1,000	-	-	2	76,000	-	-
SP. MUNICIP. OF STRATHC. COUNTY	STRATHCONA COUNTY	22,187	66	3,630,547	3.0	163.63	145	5,651,753	0.7	25.47
	SHERWOOD PARK	41,989	69	321,967	1.6	7.67	116	899,883	0.3	2.14
M.D. 8	CARDSTON M.D. #8	4,565	15	241,336	3.3	52.87	196	2,384,791	4.3	52.24
	CARDSTON	3,417	2	38,780	0.6	11.35	50	634,906	1.5	18.58
	WAGRATH	1,867	5	304,501	2.7	163.10	43	1,113,212	2.3	59.63
	GLENWOOD	295	-	-	-	-	7	41,673	2.4	14.13
	HILLSPRING	206	1	5,480	4.9	26.50	3	17,601	1.5	8.54
M.D. 9	PINCHER CREEK M.D. #9	3,172	25	278,853	7.9	87.91	224	3,489,593	7.1	110.01
	PINCHER CREEK	3,659	11	125,878	3.0	34.40	82	2,245,999	2.2	61.38
	COWLEY	273	1	20,000	3.7	73.26	15	447,435	5.5	163.90
M.D. 14	TABER M.D. #14	5,971	21	578,865	3.5	96.91	320	6,465,885	5.4	108.29
	TABER	7,214	5	85,707	0.7	11.88	107	2,716,118	1.5	37.65

(CONTINUED)

# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
M.D. 14	VAUXHALL	1,011	1	7,414	1.0	7.33	18	353,884	1.5	34.98
	GRASSY LAKE	-	-	-	-	-	2	204,895	-	-
	BARNWELL	552	1	4,801	1.8	8.70	8	12,135	1.1	2.20
M.D. 26	WILLOW CREEK M.D. #26	5,091	126	4,702,519	24.7	923.69	343	6,884,785	6.7	135.23
	STAVELY	513	-	-	-	-	7	119,110	1.4	23.22
	NANTON	1,665	7	38,930	4.2	23.38	43	328,013	2.6	19.70
	CLARESHOLM	3,438	4	7,102	91.2	323.85	152	4,278,388	348.6	19509.8
	FT. MACLEOD	3,034	4	84,759	1.3	21.34	40	1,622,225	1.3	53.47
	GRAMM	337	-	-	-	-	9	30,542	2.7	9.08
M.D. 31	FOOTHILLS M.D. #31	14,048	40	889,437	2.8	61.89	490	8,073,447	3.5	57.47
	HIGH RIVER	7,359	11	89,072	1.5	9.39	70	8,886,427	1.0	90.59
	BLACK DIAMOND	1,811	-	-	-	-	40	447,842	2.2	24.73
	OKOTOKS	8,510	18	101,000	1.9	11.87	132	1,194,798	1.8	14.04
	BLACKIE	301	-	-	-	-	8	183,758	2.0	61.05
	CAYLEY	-	-	-	-	-	-	-	-	-
	TURNER VALLEY	1,527	4	7,500	2.6	4.91	34	350,615	2.2	22.96
	LONGVIEW	303	-	-	-	-	2	11,530	0.7	3.81
M.D. 34	ACADIA M.D. #34	533	3	173,801	5.6	326.08	26	324,724	4.9	60.92
	EMPRESS	186	-	-	-	-	-	-	-	-
M.D. 44	ROCKY VIEW M.D. #44	23,326	95	4,225,119	4.1	181.13	1033	19,750,314	4.4	84.87
	BEISEKER	708	-	-	-	-	8	531,184	1.1	75.02
	COCHRANE	7,424	30	101,432	4.0	13.66	154	1,126,712	2.1	15.18
	CROSSFIELD	1,899	1	20,000	0.5	10.53	16	2,269,475	0.8	119.51
	IRRICANA	823	1	20,000	1.2	24.30	12	196,502	1.5	23.88
	CHESTERMERE LAKE S.V.	1,911	3	27,480	1.6	14.38	18	221,486	0.9	11.59
M.D. 47	STARLAND M.D. #47	2,075	11	173,948	5.3	83.83	115	1,304,131	5.5	62.85
	MORRIN	275	4	91,550	14.5	332.91	8	207,982	2.9	75.62
	DELIA	208	-	-	-	-	4	210,751	1.9	101.32
	MUNSON	204	-	-	-	-	3	120,258	1.5	58.95
M.D. 48	KNEEHILL M.D. #48	4,887	40	1,170,068	8.2	239.42	275	5,298,990	5.6	108.43
	THREE HILLS	3,367	10	34,519	3.0	10.25	71	1,245,248	2.1	36.98
	ACME	600	-	-	-	-	4	58,708	0.7	9.78

(CONTINUED)

**MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING  
DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
M.D. 48	TROCHU	958	1	300	1.0	0.31	12	39,421	1.3	4.11
	CARBON	450	1	2,250	2.2	5.00	8	99,417	1.8	22.09
	LINDEN	585	-	-	-	-	5	2,299,953	0.9	407.07
	TORRINGTON	177	-	-	-	-	-	-	-	-
M.D. 52	PROVOST M.D. #52	2,705	18	883,989	6.7	252.86	169	3,968,772	6.2	146.72
	PROVOST	1,904	2	200,675	1.1	105.40	22	1,210,685	1.2	63.59
	AMISK	214	1	1,500	4.7	7.01	8	20,111	2.8	9.40
	CZAR	199	-	-	-	-	5	109,791	2.5	55.17
	HUGHENDER	302	-	-	-	-	3	57,710	1.0	19.11
M.D. 61	WAINWRIGHT M.D. #61	4,044	25	414,250	6.2	102.44	234	5,480,118	5.8	135.02
	WAINWRIGHT	5,079	13	525,077	2.6	103.38	88	3,011,214	1.7	59.29
	IRMA	472	5	541,000	10.6	1148.19	11	758,450	2.3	160.69
	CHAUVIN	400	-	-	-	-	10	54,838	2.5	13.71
	EDGERTON	372	1	22,000	2.7	59.14	7	67,685	1.9	18.19
M.D. 87	BONNYVILLE M.D. #87	12,878	52	1,802,599	4.0	139.98	397	7,079,091	3.1	54.97
	BONNYVILLE	5,100	15	1,273,054	2.9	249.62	132	3,106,145	2.6	60.90
	COLD LAKE	-	14	143,179	-	-	70	824,548	-	-
	GRAND CENTRE	-	-	-	-	-	73	1,709,632	-	-
	BONNYVILLE BEACH S.V.	64	-	-	-	-	1	2,000	1.6	3.13
	GLENDON	418	-	-	-	-	5	147,884	1.2	35.38
	PELICAN NARROWS S.V.	108	-	-	-	-	-	-	-	-
	ELIZABETH METIS SETTLEMENT	580	1	13,000	1.7	22.41	1	13,000	0.2	2.24
	FISHING LAKE METIS SETTLEMENT	542	1	15,000	1.8	27.68	2	17,500	0.4	3.23
	LAC LA BICHE	2,611	8	29,899	3.1	11.45	29	168,787	1.1	6.39
	FLAMONDON	259	3	51,666	11.6	199.48	3	51,666	1.2	19.95
M.D. 90	STURGEON M.D. #90	15,945	51	763,888	3.2	47.91	586	11,630,425	3.7	72.31
	MORINVILLE	6,226	7	9,611	1.1	1.54	76	807,895	1.2	12.98
	GIBBONS	2,748	1	9,677	0.4	3.52	51	979,010	1.9	35.63
	BON ACCORD	1,493	-	-	-	-	28	458,184	1.9	30.69
	LEGAL	1,095	2	146,510	1.8	133.80	13	309,234	1.2	28.24
	REDWATER	2,053	1	87,587	0.5	42.66	27	1,089,723	1.3	53.08
M.D. 92	WESTLOCK M.D. #92	8,958	31	1,083,266	4.5	155.69	319	6,806,832	4.6	97.83

(CONTINUED)

# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
M.D. 92	WESTLOCK	4,817	10	40,970	2.1	8.51	82	1,156,159	1.7	24.00
	CLYDE	410	-	-	-	-	5	358,337	1.2	87.40
	LARKSPUR S.V.	11	-	-	-	-	-	-	-	-
M.D. 130	SMOKY RIVER M.D. #130	2,491	15	129,967	6.0	52.17	242	4,346,469	9.7	174.49
	FALHER	1,149	8	495,752	7.0	432.33	61	2,516,502	5.3	219.02
	GIROUXVILLE	332	-	-	-	-	11	323,832	3.3	97.54
	MCLENNAN	957	1	100	1.0	0.10	33	1,236,325	3.4	129.19
	DONNELLY	403	-	-	-	-	10	612,380	2.5	151.98
M.D. 133	SPIRIT RIVER M.D. #133	809	5	951,012	6.2	1175.54	130	3,071,956	16.1	379.72
	SPIRIT RIVER	1,112	1	77,702	0.9	69.88	28	671,267	2.5	60.37
	RYCROFT	667	-	-	-	-	20	1,195,493	3.0	179.23
M.D. 135	PEACE RIVER M.D. #135	1,562	14	74,815	9.0	47.90	121	1,759,188	7.7	112.62
	BERWYN	606	2	211,042	3.3	348.25	14	429,337	2.3	70.85
	GRIMSHAW	2,661	-	-	-	-	52	1,148,983	2.0	43.18
M.D. 136	FAIRVIEW M.D. #136	1,829	10	120,089	5.5	65.66	242	3,943,245	13.2	215.60
	FAIRVIEW	3,318	4	17,581	1.2	5.30	158	5,095,175	4.8	153.68
M.D. 99	CLEARWATER M.D. #99	10,920	76	3,031,088	3802	303248	648	21,074,620	3241	210843
	ROCKY MOUNTAIN HOUSE	5,805	18	188,104	3.1	28.61	119	7,040,984	2.0	121.29
	CAROLINE	472	-	-	-	-	3	97,318	0.6	20.62
	BURNSTICK LAKE S.V.	5	-	-	-	-	-	-	-	-
M.D. 1	CYPRESS M.D. #1	5,683	21	417,608	3.7	73.48	396	8,872,157	7.0	156.12
	IRVINE	-	-	-	-	-	18	5,859,564	-	-
	REDCLIFF	4,104	13	231,554	3.2	56.42	143	1,244,042	3.5	30.91
M.D. 8	BIGHORN M.D. #8	1,269	13	1,120,192	10.2	882.74	73	2,154,616	5.8	169.79
	GHOST LAKE S.V.	63	-	-	-	-	2	10,717	3.2	17.01
	CANMORE	9,015	12	330,899	1.3	36.71	106	5,742,513	1.2	63.70
	WAIPAROUS S.V.	47	-	-	-	-	-	-	-	-
M.D. 77	BRAZEAU M.D. #77	6,588	12	472,376	1.8	71.69	282	8,835,083	4.0	134.09
	DRAYTON VALLEY	5,863	10	173,806	1.7	29.54	114	2,433,631	1.9	41.37
	BRETON	521	1	1,000	1.9	1.92	14	507,300	2.7	97.37
M.D. 7	BADLANDS M.D. #7	1,248	2	5,800	1.6	4.65	43	597,741	3.5	47.97
M.D. 94	YELLOWHEAD M.D. #94	9,352	32	1,888,013	3.4	201.88	417	18,834,275	4.5	201.39

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# **MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD**

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
M.D. 94	EDSON	7,399	8	59,383	1.1	8.03	105	1,498,931	1.4	20.28
	HINTON	9,961	18	1,159,808	1.8	118.43	138	3,750,875	1.4	37.85
M.D. 131	EAST PEACE M.D. #131	2,552	8	375,397	3.1	147.10	45	1,108,343	1.8	43.38
M.D. 125	BIG LAKES M.D. #125	4,479	17	529,387	3.8	118.19	44	1,767,459	1.0	39.46
	EAST PRAIRIE METIS SETTLEMENT	470	.	.	.	.	.	.	.	.
	GIFT LAKE METIS SETTLEMENT	905	.	.	.	.	2	40,581	0.2	4.48
	PEAVINE METIS SETTLEMENT	557	.	.	.	.	1	40,000	0.2	7.18
M.D. 23	MACKENZIE M.D. #23	7,980	20	789,288	2.5	98.91	102	3,662,388	1.3	45.89
	HIGH LEVEL	3,093	9	159,933	2.9	51.71	39	2,894,806	1.3	93.59
M.D. 66	RANCHLAND M.D. #66	108	1	19,200	9.3	177.78	4	23,598	3.7	21.85
M.D. 22	MANNING	1,295	8	106,790	6.2	82.48	16	380,133	1.2	29.35
	PADDLE PRAIRIE METIS SETTLEMENT	717	2	212,500	2.8	296.37	4	233,334	0.8	32.54
M.D. 124	LESSER SLAVE RIVER M.D. #124	2,716	9	829,617	3.3	305.46	37	1,981,339	1.4	72.95
I.D. 4	I.D. #4	279	1	50,000	3.6	179.21	3	229,096	1.1	82.11
I.D. 5	I.D. #5	.	3	2,886	.	.	87	320,858	.	.
I.D. 8	I.D. #6	.	.	.	.	.	12	157,224	.	.
	CROWSNEST PASS	7,021	.	.	.	.	152	3,384,852	8.3	279.47
I.D. 9	I.D. #9	1,305	2	305,100	1.5	233.79	35	4,653,941	2.7	356.62
	BANFF	8,098	1	125,000	0.2	20.50	55	1,714,384	0.9	28.11
I.D. 12	I.D. #12	77	1	350,000	13.0	4545.45	25	720,839	32.5	936.15
	JASPER	4,691	3	177,229	0.6	37.78	58	3,486,161	1.2	74.32
I.D. 13	I.D. #13	10	1	2,212	100.0	221.20	2	2,784	20.0	27.54
I.D. 17	I.D. #17	2,552	.	.	.	.	672	18,625,117	26.3	729.82
I.D. 18	I.D. #18	.	.	.	.	.	380	27,879,279	.	.
I.D. 24	I.D. #24	370	.	.	.	.	2	15,000	0.5	4.05
INDIAN RESERVES	INDIAN RESERVES	49,331	144	3,178,167	2.9	64.43	937	25,040,192	1.9	50.76
S.A. 2	S.A. #2	5,756	4	187,045	0.7	32.50	124	2,345,158	2.2	40.74
	HANNA	3,001	4	249,074	1.3	83.00	38	1,635,590	1.3	54.50
S.A. 3	S.A. #3	.	4	35,348	.	.	78	872,168	.	.
	CEREAL	213	1	1,711	4.7	8.03	2	63,211	0.9	29.88
	OYEN	1,084	3	274,331	2.8	257.83	18	789,518	1.5	74.20

(CONTINUED)

# MUNICIPAL FIRE LOSS STATISTICS FOR THE YEAR ENDING DECEMBER 31, 1997 AND FOR THE 10- YEAR PERIOD

MUNICIPALITY		1997					10 YEAR			
							TOTAL		AVERAGE	
		POPULATION	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS	FIRE COUNT	\$ LOSSES	FIRE RATE	PER CAPITA \$-LOSS
S.A. 3	YOUNGSTOWN	239	1	7,400	4.2	30.98	9	57,674	3.8	24.13
S.A. 4	S.A. #4	-	15	2,308,974	-	-	95	4,173,648	-	-
	VETERAN	317	2	1,700	6.3	5.36	7	68,196	2.2	20.88
	CONSORT	794	1	3,755	1.3	4.73	10	184,888	1.3	20.74
CITIES	CALGARY CITY	790,498	1863	28,042,305	2.4	35.47	19457	168,737,841	2.5	21.35
	CAMROSE CITY	13,728	18	239,775	1.3	17.47	209	3,871,002	1.5	28.20
	DRUMHELLER CITY	8,587	6	28,001	0.9	3.95	112	2,716,413	1.7	41.24
	EDMONTON CITY	616,306	1211	16,548,240	2.0	26.85	14123	152,124,009	2.3	24.68
	GRANDE PRAIRIE CITY	31,140	132	2,502,778	4.2	80.37	1186	11,277,505	3.8	36.22
	LETHBRIDGE CITY	66,035	195	997,155	3.0	15.10	1748	10,256,115	2.6	15.53
	LLOYDMINSTER CITY	11,317	13	384,942	1.1	34.01	231	4,984,913	2.0	44.06
	MEDICINE HAT CITY	46,783	104	1,523,383	2.2	32.56	1082	12,781,779	2.3	27.32
	RED DEER CITY	60,075	96	2,056,102	1.6	34.23	1137	13,355,432	1.9	22.23
	WETASKIWIN CITY	10,959	8	63,193	0.7	5.77	162	4,265,586	1.5	38.92
	ST. ALBERT CITY	46,888	51	760,638	1.1	16.22	548	4,411,614	1.2	9.41
	LEDUC CITY	14,305	15	202,911	1.0	14.18	199	2,727,010	1.4	19.06
	AIRDRIE CITY	15,946	14	672,816	0.9	42.19	206	9,943,927	1.3	62.36
	FT. SASKATCHEWAN CITY	12,408	33	255,144	2.7	20.56	276	5,852,496	2.2	47.17
	SPRUCE GROVE CITY	14,271	25	82,291	1.8	5.77	234	2,771,092	1.6	19.42

Commentary: Population figures for municipalities except Indian Reserves were obtained from the Department of Municipal Affairs, Alberta Government. Population figures for Indian Reserves were obtained from Indian and Northern Affairs Canada, and reflects the population on reserves only.



## **SECTION 5**



## **Glossary**

**Fire Commissioner's  
Statistical Report**

**1 9 9 7**



## GLOSSARY

### ACT OR OMISSION

The human element by which someone has done something (an act) or failed to do something (an omission). The act or omission indicates whether the fire was deliberate, neglectful or accidental.

**Incendiary or Set Fires:** includes arson, suspected incendiarism, riot, mischief or vandalism.

**Misuse of Source of Ignition:** includes disposal of smoker's material, thawing, inadequate control of an open fire, children playing with source of ignition, welding or cutting too close to combustible material or torch too close to combustible material.

**Misuse of Material Ignited:** includes fuel spilled accidentally, improper fuelling technique, cleaning or washing parts, improper container, overheated cooking oil, combustible placed too close to heat, and improper storage.

**Mechanical and Electrical Failure or Malfunction:** includes part failure, automatic or manual control failure, electrical short circuit and part worn out.

#### **Construction, Design or Installation**

**Deficiency:** includes construction or design deficiency, installation too close to a combustible, other installation deficiency or over fusing.

**Misuse of Equipment:** overfuelling, includes any misuse of equipment or tools.

**Human Failing:** includes person asleep, temporary loss of judgement, physical disability, panic, influence of alcohol or drugs and ignorance of hazard.

### AREA OF ORIGIN

The area of a building or vehicle where the fire started.

**Means of Egress:** the area allowing an individual transit or a way of going out. Includes hallway, stairway, escalator, lobby and elevator.

**Assembly, Sales Area:** areas where groups of people gather. Includes theatre, arena, lounge, living room, sales or show room, library, museum and sports facility.

**Function Area:** the area where a mode of action or activity is undertaken. Includes sleeping area, dining area, bar, washroom, office, laboratory, printing and photographic reproduction area, kitchen, laundry room, operating room, performance area and manufacturing area.

**Storage Area:** the area inside a building where items are stored. Includes product storage area, closet, equipment area, records storage area, shipping and receiving area, trash and rubbish area, vehicle garage and agricultural product storage area.

**Service Facilities:** conveyance items such as dumbwaiters, service shafts, laundry and garbage chutes, heating and cooking ducts and chimneys or gas vents.

**Structural Area:** includes crawl space, balcony, ceiling and floor assembly, wall assembly, exterior wall or exterior roof and awning or canopy.

**Vehicle Area:** includes engine area, fuel area, control area, passenger area and cargo area.

**Outside Area:** includes open area such as lawn, field or park, court, patio, parking area, outdoor storage area and trash or rubbish area.

### **DEATH**

A person killed accidentally as a direct result of a fire or a person who dies from a fire injury within one year following the date on which the injury was sustained.

**Fire Death:** refers to a person who died as a direct result of a fire, either by smoke inhalation or burns.

**Death Involving Fire:** refers to a person who was in a place where fire occurred, but who may have died from a cause other than the fire itself (e.g. a person who dies in an automobile accident where the vehicle catches fire prior to death, a suicide by burning or asphyxia, an incendiary fire set for the specific reason of killing).

### **FUEL OR ENERGY**

Is the fuel associated with the source of ignition. Includes coal, wood, fuel oil, gasoline, natural gas or other fuel gases, smoker's material, electricity, lightning or exposures.

### **IGNITION SCENARIO**

The combination of three components: the source of ignition, material first ignited and act or omission: in the chain of events that lead to a fire.

A small number of ignition scenarios recur in the ignition of fires that account for the majority of fire incidents. Identification of these helps locate problems more specifically for the design of appropriate prevention strategies.

### **INJURIES**

A person accidentally injured as a direct result of a fire (a member of the fire department accidentally injured while in the process of fighting a fire or injured as a

result of an accident while en route to or returning from the scene of an actual fire is considered a fire action injury).

**Minor Injury:** an injury that does not require hospitalization of over a 24-hour period or absence from work of not more than one full day.

**Light Injury:** an injury that required admission to a hospital of over 24 to 48 hours and/or absence from work for a period of two to fifteen days.

**Serious Injury:** an injury that required admission to a hospital for a period of more than 48 hours and/or an absence from work for a period exceeding fifteen days.

### **MATERIAL FIRST IGNITED**

The actual material that ignites and creates the fire condition.

**Structural Components, Finish Materials:** includes roof covering, wall covering, floor covering, structural component, ceiling covering and insulation.

**Furniture, Furnishings:** includes furniture, ironing board, mattress, bedding, drapery and broom, mop or brush.

**Clothing, Textiles:** includes clothing, fabric, fur and tarpaulin.

**Wood, Paper Products:** includes wood, wood shavings, paper, cardboard and paper stock.

**Flammable Liquids:** includes gasoline, fuel oil, flammable liquids, paint, varnish, tar, asphalt, polish and wax.

**Flammable Gases:** includes natural gas, propane, anaesthetic gas, acetylene and hydrogen.

**Chemicals:** includes starch, flour, cellulose nitrate, plastic, oxidizing material, magnesium and alloys, titanium, natural or synthetic rubber and ammonium nitrate.

**Agricultural, Forestry Products:** includes fibres, grains, hay, trees, felled timber, grass, fertilizer and manure.

**Miscellaneous:** includes coal, garbage, trash, oily rags and artificial trees.

### PROPERTY CLASSIFICATION

The principal use or occupancy of the building.

**Assembly:** property for the gathering of persons for civic, political, travel, religious, social, educational or recreational purposes. Includes theatres, amusement or recreation places, schools, colleges, universities, churches, social or sport clubs, libraries and museums, eating establishments and passenger terminals.

**Institutional:** property for medical treatment, or care of persons suffering from illness, disease or infirmity, for the care of infants, convalescents or aged persons and for penal or corrective purposes. Includes prisons, jails, reformatories, homes for the aged, children's hospitals, hospitals and clinics.

**Residential:** property in which sleeping accommodation is provided for normal residential purposes. Includes one and two family dwellings, apartments, rooming or boarding houses, hotels, motels, dormitories and mobile homes.

**Business and Personal Service:** property for conducting business. Includes offices, personal services such as hairdressing and data processing or storage facilities.

**Mercantile:** property used for the display and sale of merchandise. Includes food and beverage sales, textile and clothing sales, furniture and appliance sales, books and specialty sales, recreational and hobby supply sales, repair shops, laundries, vehicle and boat sales and department or variety stores.

**Industrial Manufacturing Properties:** property where raw materials are transformed into new products and where the component parts of manufactured products are assembled. Includes chemical, petroleum, paint and plastic manufacturing; wood, furniture, and paper manufacturing; metal product and electrical equipment manufacturing; food processing; beverage, tobacco, soap and margarine manufacturing; textile manufacturing; footwear and wearing apparel manufacturing; and vehicle and related equipment manufacturing.

**Storage Properties:** property used primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals. Includes agricultural product storage; textile, fibre and clothing storage; processed food and beverage storage; flammable liquids, gas and petroleum products storage; wood, furniture, and paper products storage; chemical, paint and plastic storage; metal products, machinery, and electrical appliance storage and vehicle storage.

**Special Property:** Transportation Equipment: mainly outdoor property and transport equipment. Includes outdoor property, piers, buildings under construction or demolition, watercraft, rail transport vehicles, ground transport vehicles, aircraft and other special equipment.

**Miscellaneous:** includes laboratories, farm facilities, outbuildings, utilities, glass and pottery manufacturing, mining, communications and nucleonics.

## **SOURCE OF IGNITION**

The actual equipment, device or object which brings about ignition.

**Cooking Equipment:** includes stove, range, food warming appliance, deep fat fryer, broiler and portable cooking unit.

**Heating Equipment:** includes central heating unit, service water heater, space heater, fireplace, chimney, flue pipe and steam or hot water pipe.

**Appliances and Equipment:** includes dryer, air conditioning equipment, pressing iron and incinerator.

**Smoker's Material and "Open" Flames:** cigarettes, pipes, cigars and/or matches, lighters when used in conjunction with smoking. Includes matches and lighters not associated with smoker's material, candles, cutting torches, welding equipment and hot ashes.

**Exposure:** includes exposure from an attached or detached structure, lumberyard, open fire, forest, grass and brush.

**Miscellaneous:** includes internal combustion engine, heat treatment equipment, industrial oven, tar pot, fireworks, conveyors, commercial and industrial machinery and chemical reactions.

